

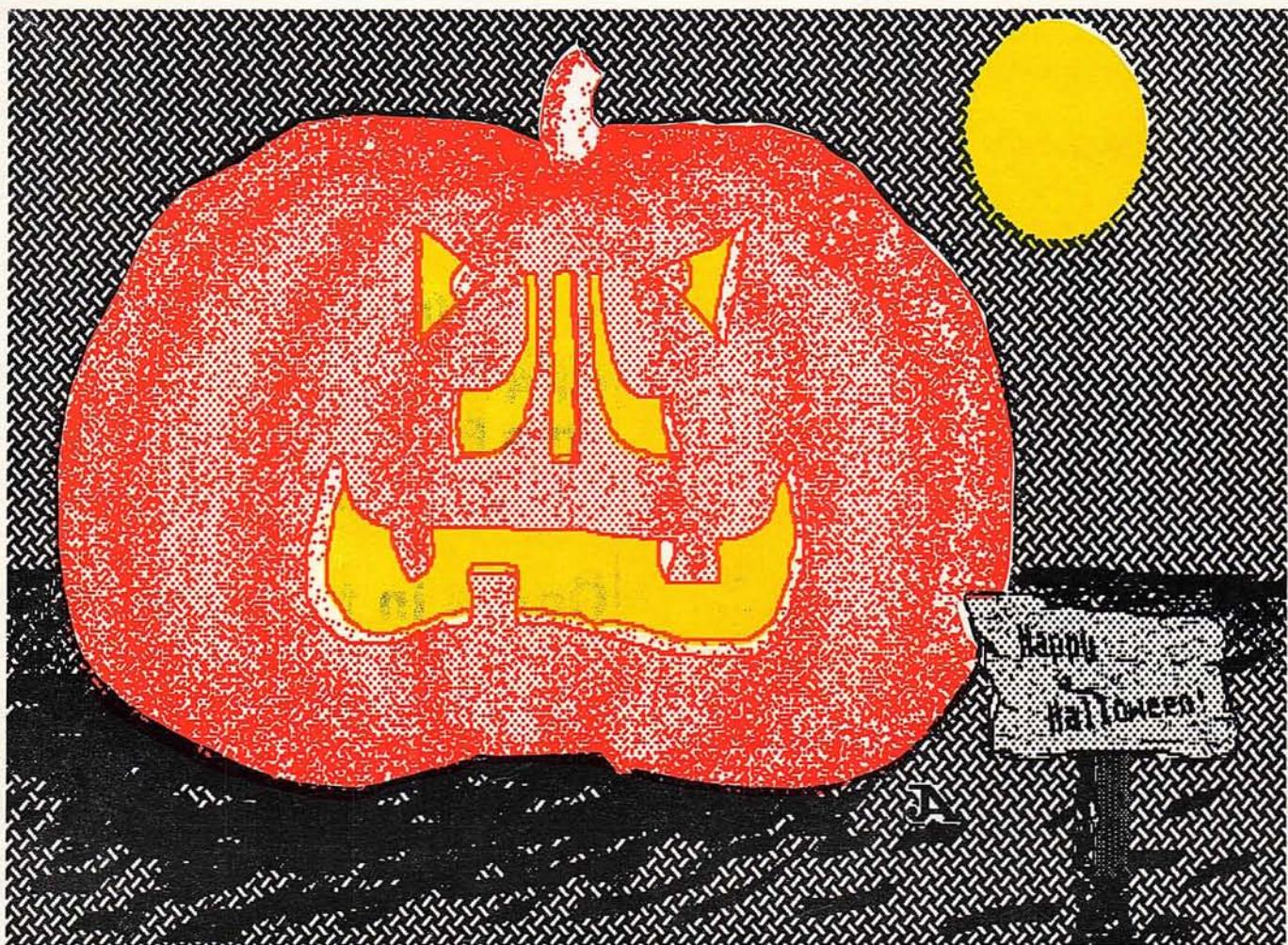
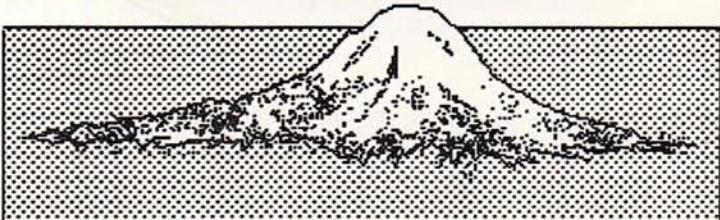
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FOR THE ATARI™ COMPUTER
USER AND ENTHUSIAST

OCTOBER 1987

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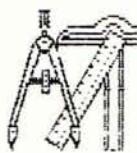
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8-BIT SUPPORT

Editorial by Al Cummings

There is a lot of new talk about 8-Bit support lately, or lack of it if you feel that way. I've been trying to look at the real reason for the current problems and what can be done about it. I have a few thoughts that are hard to swallow, but it might be the only hope.

First, everyone says there is no new software. Not true, there are not a lot of new programs (and most of these are games), but many new things are coming out. Of course, the biggest area of new software is in public domain, but there are also new titles still showing up. I bought the second part of Alternate Reality this month and there were several other new goodies on the shelf. It is there if you look and if you want more, then you have to buy what is for sale.

Second, a lot of people are getting ST's - so what happens to all the hardware they had? It just sits in a corner or sells for pennies on the dollar, if at all. Two years ago many users were willing to buy things, and would pay good money for stuff like ATR interfaces and extra computers; but these days no one would buy one thing more than they really need! What would have happened to us and ICD if the MIO came out back in the *heydays*? Now it is something hardly no one wants to bother with. The big thing happening, I feel, is that if someone has enough money for a lot of hardware; they buy an ST. Is there any hope for this to change? Not really unless someone comes up with something really great; that will make other owners come in to the 8-Bit club.

Third, are the people who have the 8-Bit computer and don't want to buy anything new, but would also like to use what they have more. You have to ask why you got it in the first place and if you have done all of that then try something new. Write a program, draw a picture, review something for the newsletter, or play some of the old games again. I did not enjoy my computer until I got hooked on a modem and found the BBS world. Less than half the members have or use modems, and that is where the most support comes from these days. The club PD disks are real first rate and worth the time to look though and pick-up the latest stuff. Also try the older 'classics' for a good source of quality software.

Lastly, the users groups are going to be more involved with the ST, and the only way to help change that is to suggest what you want to see at the meetings. I can show some of the things I have, and others will come up and demo items, but more input on what 8-Bit people want to see is needed. Now there are always people who do not like to stand up in the front, but if you have something to show, club officers can help you present it. Remember the rule that the total effort is much greater than the sum of the parts, but with the same people doing the bulk of the work, the totals are never going to get much bigger!

That is all I have to say right now on this subject and hope it will stir some new vigor out there to move and grow with what we have. *The greatest support is here now with you providing the effort to improve - your dollars saying you still want 8-Bit support and you doing what you can to help the rest of us!*

DEAR EDITOR

PIRACY - A Letter to PSAN

Not wanting to sound like a broken record, but let's talk of piracy... again. This time though, not of commercial software, but rather 'public domain' software. The piracy lies wherein somewhere along the way, the original author's name is replaced by some *#%&@!! who felt the small enhancement, he/she/it, made to a good program warranted him the right to replace the authors name with his own.

I personally modify several programs a year, mostly small enhancements to ease the use of said program. If the enhancement is very large I may add a line or two to the program, usually along the line of; 'Modified by on such and such a date'. I always leave the original authors name and other data intact in the program. After all, he came up with idea and made it work and was kind enough to let us all have it free of charge.

Now I know you are wondering why would I bring up this subject with such a vengeance. So I will tell you, it is not only my story, but also that of several other authors who have given up because of this. I was on a BBS recently, on the East Coast. I saw some interesting titles, mostly utilities. So I downloaded them. I started trying them out without looking at them first. (the programs themselves) At once I was surprised to find a program that worked very much like one I had written not so very long ago. The title screen was different, one or two keys were a bit different, but all in all, the same program. I immediately looked at the source code. (actually I had to call the BBS back and download the source code) I looked it over, sure enough it was mine, I like to think I have my own 'style' of writing programs. But truly, the code was the same except for MY NAME and a few small changes that were made to the program. Even the copyright notice was the same, but for the name. Now, I don't write a lot of programs that I let out to the public domain, but those that I do, I don't expect this to happen to them. So using your own imagination, you can feel what I was feeling that night. I called that BBS and left a rather terse message to the SYSOP about that program. The SYSOP phoned the next day, voice, I explained, in a calmer tone, what I have said here. He gave me the name of the BBS he got it from. So off on a goose chase I went. The next SYSOP got it from a member of the club he belonged to. I called this person on the phone. He got it from a BBS in Texas, now we're getting somewhere, or so I thought. I called that BBS, after a few weeks I finally got a response from the 'BBS'. (I never did know who I was 'talking to' there) Basically 'they' said that 'they' were unsure of how it got on their BBS. However, it was a useful program, and they were going to leave it up. Fine and dandy, how about changing it so I get the proper credit. Answer 'NOPE'. You must prove to our satisfaction that you wrote it, and from where we sit we don't think you can. Great, now what do I do?

I wrote this letter in hopes of reaching folks to let them know what people like me think of people like them and the *#%&@! who STOLE my program in the first place.

Signed,
(name withheld by request)

Puget Sound Atari News

From The GENIE Atari Round Table **DAREK'S 8-BIT EMULATOR FOR THE ST**

Compiled by Wally Wong, BRACE

The following messages were originated during the first two weeks of September.. They pertain to the 8-bit emulator for the ST written by Darek Mihoca (DAREKM). ANALOG's ST-Log will be publishing this program in the September disk issue, I think. I hope you find it as interesting and very informative as I did.. These messages have been edited to remove time/date lines, correct spelling errors and have been consolidated into a single paragraph by removing extra (CR)'s. All text is intact.

DAREKM Sub: 8 bit emulator for ST and copying ROMs. Discussion on the legalities of an emulator for the ST that would run 8-Bit Atari and Apple software.

DAREKM

First of all, Jeff, if you have an XE, there may be no need for you to use the emulator, just like owners of real PCs and AT wouldn't want to run PC Ditto at 1% of the speed of an AT. However, for people who do not have both machines (there are a lot of ST owners who were NOT previously 8 bit owners) this is a cheap (free!) alternative. Secondly, I will not dispute the fact that the emulator is slow and will again say that the speed can't be improved much, although I am currently rewriting the entire program for speed and not space, as was required to fit in the magazine. There will be a slight speed improvement, but not much. It's relative speed is still much better than the relative speed of PC Ditto, and the new version will be GEM based to allow for much easier configuration of the emulator. Thirdly, everyone who says they have seen it have not seen the version that will appear in a week or two in ST LOG. The latest COMPUTE ST spends 3/4 of a page speculating about the emulator, talking about a version I sent them 3 months before any of this on GENIE started. They do mention this message base, so I think they just didn't read it too carefully to see what the actual state of the project is. They also mention some things about Atari Corporation which I think is straight slander and Atari should take action against COMPUTE ST.

Finally, about the matter of copying software. There are thousands of programs that are available on GENIE, and on BBSs that are public domain 8-Bit programs. I mention protected software because we know that in reality people will try to run it. The emulator is capable of it and it would be stupid to try to deny the facts. I pose this question to you: Do you really believe that every single person who bought PC Ditto really owns a copy of MS DOS and all the software that they run on PC Ditto? I think that a large majority of PC Ditto owners do not. I don't know what the exact numbers are, but anyone who copies MS DOS is just as guilty of piracy as someone who tries to run a cracked piece of software on my emulator. Unless of course, it is for the purposes of study, etc, etc..

JEFFWILLIAMS Darek, Thanks for the reply to my message. I hope you didn't take it as a challenge to its validity. It's just that I have heard so many different things about it, that I just wanted to find out what one should realistically expect to be able to do with it.

Most of the people (in user groups and in newsletters) I hear or read discussing your emulator seem to believe it will be capable of replacing an Atari 8-Bit entirely... And those same folks usually only hear that Atari Corporation was trying to stop it, much like you hear those conspiracy rumors about some miracle carburator that some auto or oil company owns the patent to, but are supressing its release.

As we all know, you and Atari were able to come to an agreement as to how your emulator may be distributed, squashing that misconception. With its imminent publication in ST-Log, all other misconceptions should be cleared up as well.

Congratulations on what must have been an exhaustive effort (in more ways than one)! Jeff

DAREKM I just saw the opening message that states that ANALOG programs will now be available here on GENIE. That means that the emulator will here as soon as ANALOG sends the September files for ST-Log. (I assume 'ANALOG' also meant 'ST-Log'). Jeff, I'm glad you understand the position of the emulator as a cheap alternative to the real thing, just like PC DITTO! and MAGIC are, and never will be, complete replacements. Now if only some other people understood that too, and didn't expect it to be a miracle replacement.

DARLAH The MAGIC SAC is quite a piece of work. It runs a great deal of items and soon will run protected items. I think all the users are wondering, if it will be as good as the SAC is for the ST.....I know I am.

DAREKM Well, the SAC has the one advantage that it is running native machine language (i.e. 68000). That's how it gets away with running at full speed. I think a more fair comparison would be PC DITTO!, since it has to run a non-native code. PC DITTO! is very slow but very compatible. The Xformer is a bit faster, but less compatible (ST-Log version coming out soon). However, since I am in the middle of a complete rewrite, things will get better. However, if as according to rumors, ST-Log goes belly up before publishing the next issue, there may be a bigger problem than just speed. Let's all face east, chant and pray that ST-Log survives at least long enough to publish September.

JEFFWILLIAMS Darek, I am looking forward to the publication of your emulator. I was talking to Robin Levitsky (Levinsky?) of ANALOG (about problems with our dealer orders for our computer store) just a few days ago and I asked her if there is any problem at ANALOG that may affect their future. She said everything is okay and that the problems with meeting their recent publication schedules has been complicated to a large degree to changing printers and disk duplicators recently. I hope she was speaking from knowledge and was telling me the truth. By the way, the disk version of ST-Log that we've all been waiting for should be shipping next week. The September issue should follow about 2 weeks later.

AIRBALL

An ST Game From Microdeal

Reviewed by Bill Estes, BRACE/STDIO

Microdeal is again giving us another new game to enjoy, and as usual, they are leading the way in great arcade games. Microdeal terms this an 'Arcade Adventure Game', and an adventure game it is. You start out as a ball of air with a slow leak. You were turned into this 'Airball' by an evil Wizard and your task is to search a 250 room mansion looking for a spellbook that will help turn you back into a man. You must also find several valuable objects that will help you, with the aid of the spellbook, to turn back into a man.

You will start the game on a air pump, be careful though, if you stay too long on the air pump, you will explode, losing one of the lives the evil Wizard has given you. There is a bar at the bottom of the screen that will let you know when the air pressure is getting to high or too low. Care must be taken not to be over filled or under filled. If you run out of air you will also lose a life. These are just a few of the easy ways to lose lives. Almost every room has at least one way to lose a life. There are spears, spikes, different surfaces that make you explode, pitfalls that either drop you onto a sharp object or into pit that you cannot get out of. There are several air pumps throughout the mansion that will help you maintain your pressure. If you lose a life, you will be start over at the air pump you last were pumped up by. This at least will save you some tedium of going back to an area of the mansion that you were last in. As was mentioned before, there are over 150 rooms in the mansion, so explore the mansion, and find the spellbook and the other objects that will turn you back to human form.

The graphics in Airball are great to look at and the different rooms are many and varied with different looks to all of them. You will find some rooms that when you enter them you will find a black screen. These rooms require a light source of some kind, so find the flashlight and hit the space bar to pick up the flashlight or other object that you want to carry. The only problem with trying to carry objects is that you can only carry one object at a time (hint, hint). For those of you that like text adventures, this may be a game that you could also enjoy. While there are no typing of text and asking of questions, you will use your problem solving skills to find the various objects and spellbook to complete your quest.

One of my few complaints with this game is that Airball is heavily copy protected and *there is no way to save the game* after you have worked your way through the maze of rooms looking for various objects... And being tired, you would like to stop playing and save your position and start over at that point later without having to spend a lot of time finding all the objects and traveling through all those rooms again. My next complaint is a minor one. There is a hall of fame, but it is only of use while you are playing the game and after you turn your computer off *your high scores are not saved* for the next time that you want to show off to someone or want to see what the highest score earned was.

The movement from room to room is smooth but not without problems. Each room is set up on a diagonal, perspective look that gives the appearance of three dimensions. *Using your joystick to control your form of the airball is difficult to adapt to.* You can either roll or hit the fire button to bounce your way from one place to another, and this will take some getting used to. I have had the game several weeks now and have found the spellbook and several of the objects needed to finish this exciting and entertaining game.

Microdeal has again furnished us with a real winner. Edward Scio is the creator of Airball, graphics by Pete Lyon, Music by Pete Shields and Rooms by Peter Scott... and I am happy to thank them for creating *one of the best games now in my collection.* The price is regularly \$39.95, but at Xanth in Bellevue you can buy it for \$35.95. If you haven't seen or bought this game yet, then don't delay! *Get your copy while you can, this game won't stay on the shelves long!*

BOP-N-WRESTLE

An 8-Bit Action Game

Reviewed by O. Crawford, STARBASE

Are you a fan of Hulk Hogan? Do you love to hate the bad guys? Is Big Time Wrestling one of your favorite soap-operas on Saturday?? If you answered yes to any of the above questions and even if you didn't you'll love this program for your 8-bit Atari (XL/XE). All the moves, all the excitement, all the glory of being a champion are yours when you play this game.

Put a hammerlock on your opponent, do a body slam, jump from the top rope onto your opponent (its like a belly buster off a high dive if you miss).

The controls are a little difficult to get used to at the start but after a while you really get the hang of it, one move leads into the next and they seem unlimited. The best joystick I've found lately for all this arm wrestling and fighter plane flying is by Quick-Shot... it has suction cups on the bottom and holds the stick to any smooth surface for really fast action.

So if you need a real work-out, need to beat the bad guys, and work up a real appetite get **BOP-N-WRESTLE** and hear the crowd roar as you bounce and fling your opponent all around the ring. Listen... What was that... The gong sounding for another round?? ..No...the dinner bell...just one more round then I'll come and eat...put it in the microwave, I'll be there in 3 minutes...

DBASIC

A New and Fast BASIC for the ST

Reviewed by Vic Albino, BRACE/STDIO

The people at DTACK Grounded, Inc. had an interesting problem. They had been working on a revolutionary new BASIC language for several years. Now that it was ready, they naturally wanted to bring it out on a successful and powerful machine. They chose the Atari ST. Looking at the competition, however, they found that ST BASIC was being given away free. ST BASIC was slow and had many other shortcomings, but what it lacked in quality, it made up in sheer presence. It was everywhere. Everyone who had an ST also had a copy of ST BASIC. On the other hand, there was GFA BASIC. It was not free, but it was fast and of high quality. In addition, GFA had a head start that included a growing base of software and technical support. To make matter worse, several other new versions of BASIC for the ST had just been released.

At this point the DTACK staff must have realized that they would have to design a promotional strategy that was as radically different as their BASIC itself if they were to break into the Atari market. What they came up with was different indeed. They sent out 63 copyrighted disk labels, 10 complete manuals, and 2 non-copy protected master diskettes to almost every Atari user group in the country. The cover letter that came with this material encouraged the groups to generously distribute copies of DBASIC among their members.

The reason for this rather unusual marketing approach was that DTACK believed that if enough people had a chance to use this new BASIC, they would prefer it to the other languages available for the ST and would then wish to purchase the manual. In addition, the manual price was set at a modest \$39.95. The labels that are to be affixed to the copied disk purposely do not indicate a version number. This is because, according to DTACK's policies, once an individual possess any version, he is legally entitled to copy the latest version onto the same disk. Obviously, he can then make back up copies for his own use even those he does not possess additional copyrighted labels.

Now that the marketing concept has been explained, the obvious question is; 'Just what is this new BASIC like?' Well, for starters, **DBASIC is very, very fast**. In fact the name of the company, DTACK Grounded, Inc., comes from the fact that a pin on the 68000 CPU chip named DTACK runs at maximum speed when it is grounded. Be aware, however, that all this blazing speed does come at a price. The user will have to make a few mental adjustments when first approaching DBASIC.

The first surprise one will notice is that **DBASIC does not support TOS, GEM, or the mouse!** In fact, DBASIC loads in its own operating system on boot up. There are many reasons given in the manual explaining why the authors of this language decided not to operate under TOS or GEM, but they come down to increased **SPEED**. In fact, even **disk I/O is about 50% faster** using DBASIC, and each disk holds about 10% more data or 818,688 bytes (Ed., Double sided).

Of course, floppy drives rotate at 300 RPM whether using TOS or DBASIC. But because DBASIC puts more information on each track and staggers the sector numbers on successive tracks, you get improved efficiency and faster transfer rates. The result is that **DBASIC's DOS reads a disk at 20.8K/sec instead of TOS's 11.25K/sec**.

The next surprise is that **DBASIC uses an incremental compiler**. This means that you can interact with your program as you create it just like you would with an interpreter style BASIC. You get immediate syntax error checking as you input each line. You can run and test your program and receive English error messages. You can break into a running program by hitting the Control-C keys. But you also get the speed of a compiled language, since each line of code is compiled as you enter it.

Unlike GFA BASIC, which uses a Pascal type format with no line numbers and only one statement per line, **DBASIC uses line numbers which are automatically entered for you as you hit return**. Also, **multiple statements are allowed** on the same line if separated with a colon. If you would prefer to use named labels for your subroutine calls, they are supported also. There is an on-going debate between those who like line numbers and those who do not. Personally, I prefer them for the same reason they are used in legal documents. It is simply easier to find particular lines if they are numbered than if they are not. Labels are fine, but they are for sections of code, not individual lines. The best way to resolve this argument is to allow the programmer to use either method, and this is what some of the newest BASIC's have done.

Now for the next surprise: **DBASIC has no reserved words**. You can use just about anything for your variable names. This is because it looks at the word's position in the statement to determine its function. Therefore, the following lines would be legal: **LOAD LOAD** or **10 LET LET=7** or **20 FOR FOR=0 TO TO STEP STEP**. Of course, this type of code would drive a reserved-word BASIC crazy. DBASIC also looks at all the characters in a variable name, up to 255 of them, and is case sensitive too.

When using some BASICs one must be careful about the location of subroutines. If you put them at the beginning of a program, they run faster than if they are positioned at the end. This is because, the lines are searched linearly from top to bottom. **The location of routines is unimportant in DBASIC**, however, as they will always run at the same rate. All BASICs allow you to peek and poke bytes into various memory locations, but **DBASIC enables you to poke bytes, words, strings, or entire arrays**. This has some obvious applications where graphic animation is concerned when large amounts of memory must be moved around quickly--a kind of software blitter chip.

(Continued at bottom of the next page)

PHANTASIE ADVENTURE

Gaming on the ST

By Dhri-Zhan, STARBASE

Thud and I were playing Phantasie Two, side by side on an Atari 1040ST and a 520STFM. Our bands of adventurers were weary because most of them had journeyed through Phantasie One with us. I was very attached to my group. In fact, Thud accused me of cheating because every time one of my group died, I refused to save the game no matter how many experience points I had. Then Phantasie Three came out. Thud immediately began playing with the characters he had in Phantasie Two. I tried to transfer my characters and ... a glitch in the program refused to let me transfer.

Thud is positive that I did something to my disks, but I am sure that it was a program glitch because my characters were so awesome!! I fussed around for three days trying to transfer my band, but the best I could do was to transfer three of them. I created a new ranger. Still, I played Phantasie Two because I was not happy with the group I could muster. Thud tried to help. On an old disk we had discarded in Phantasie One there were some 'SUPER CHARACTERS' {These guys don't work in Game One}. While we were trying to transfer the mighty band of my group from Game Two, Thud transferred the *(Next column please)*

'SUPER GUYS'. Then he decided to try them in Game Three. They have awesome beat all to heck!!

Game Three is tough!! I don't like my guys to die, so I added two 'SUPER GUYS' to the band. We went through Game Three in three weeks. Thud and I were playing side by side -- This helps, because as one goes through a maze, the other can profit by the other's mistakes. Finally I was ready to meet Nikademus.

I made one trip through the perilous lava and found the maze. My band was battered. I gave up and went back to town. Thud was having trouble with the same maze. I had saved it and offered to show him the maze that had defeated me {I could hear Nikademus' evil laughter through the cracks in the wall}. As I was showing Thud the area that had me stumped, I found a new way through. Suddenly I was face to face with Nikademus!!! The battle raged!! My trusty group defeated Nikademus!! And I had finished before the expert, Thud! Of course, I would never rub it in, but it was great!!! The ending of the game is a glorious finish to the greatest quest - so far!!!

(DBASIC - Continued)

Now for the next surprise. There is no **DELETE** command in DBASIC DOS to erase a file from a disk. The authors felt that easy deleting of files has been responsible for enough trouble in the course of human events. So they eliminated it. Instead you may **SCRATCH** a file which marks it as one that will not be transferred to another disk when using the **COPY** utility. If you use the **BACK UP** utility, however, even the SCRATCHED files will be copied onto the destination disk. Obviously, there is also an **UNSCRATCH** utility so you can reclaim what you formerly thought you did not want.

The screen editor is clean (no windows) and very easy to learn. In fact, it is quite similar to the Atari 8-bit machines. It does not possess advanced word processing type features like search and replace, but it is quite functional. Sound is not directly supported in DBASIC, but can be accessed via **POKE**. However, no information about how to do this is not given in the manual. There is a **COLLECT** command that clears and reconstructs the symbol tables by recompiling the entire program. Basically, what this command does is **COLLECT** the garbage left over after a lot of editing has been done. The authors felt that such good housekeeping rules would mean less chance of a crash. Although both integer and floating point math are supported, they should not be mixed in the same equation. Again, this is to obtain maximum speed. If you insist upon mixing them, DBASIC supplies conversion commands.

Due to its incompatibility with TOS, the transfer of DBASIC files over modem is a problem. The authors have realized this and will be making available two programs that allow DBASIC files *(Next column please)*

to be sent over modem and recovered using TOS. This is an important part of DTACK's strategy of encouraging a large number of users and disseminating a comprehensive library of DBASIC programs as rapidly as possible.

Currently DBASIC does not support hard disks attached to the ST. This is something else that requires immediate attention. Many of the opinion leaders in the Atari community have opted for hard disks, and after making such a substantial investment, they are unlikely to abandon them just to use a new BASIC. The DBASIC manual is good, and at 288 pages covers the commands adequately. However, the lack of an index should be remedied in the next edition.

Will this unusual marketing approach, and expensive gamble, of DTACK Grounded to introduce its new language really pay off? Only time will tell. Without question, this unique BASIC has some exciting potential. DTACK certainly has at least attained its first two goals, namely widespread publicity and availability for its new product. From complete anonymity only a few short weeks ago, it has been demonstrated, discussed and distributed at virtually every Atari user group in the country. That alone is a remarkable feat. Now we must all wait to see if the language is really used. Only then will be know if DBASIC is to take its place among the successful languages for the Atari ST.

DTACK Grounded, Inc.
1570 Pacheco B-7
Santa Fe, NM 87504
\$39.95

PSAN Feature Articles - ST & 8-Bit

PHANTASIE SUPER CHARACTERS

or *Revenge of The Players Against All That Is Evil In The Gaming Universe*
By Thud Rooter, STARBASE

I have played all three versions of PHANTASIE and only in the last week did I actually beat one. I beat version III!

Before you get confused this is a review of a public domain disk that I got off GEnie. It is a disk of characters. But WHAT characters! It works well in Game Three, is a little buggy in Game One and is totally awesome in game two. Try to imagine (it will help a heck of a lot if you have played the game) characters with stats of 757 in every category. For those of you who haven't played the game 25 is max (as far as I can tell) for strength, intelligence, dexterity, constitution, charisma, and luck in the regular game.

Some deranged person who couldn't win with the characters he generated in the game, but who COULD take the program apart and 'tinker' did just that.

Picture an elvish wizard named Elwood. Now you would expect a wizard, even one of the elvish stock to be real bright and moderately strong. So 20 for brains and hopefully 17 or 18 strength, right?

In the data disk in the STARBASE library, Elwood has 767 strength, 770 intelligence, 512 hit points and 517 magic. Elwood laughs at dragons, sneers at giants and marvatzes across lava while barely getting his armor scorched.

St. Ives, the halfling priest only has 453 strength, but still has 767 in each of the other categories to make him a hobbit to stand tall in any party.

As noted above I beat Phantasie III this week. And I did with all normal characters, generated in the context of the game. Except for one of the super characters that is. I always said I didn't finish Game One because Game Two was more fun. And then I said I hadn't finished Game Two because Three came out.

The lady who plays on the ST beside me brought this all to a head when we realized that Game Three was the toughest of them all. I had managed to get a couple of characters started and she was having hers die off left and right. So she asked me to bring up her characters from Game One.

Bearing in mind that we have a whole bin full of Phantasie disks with assorted back-up characters it wasn't surprising that I put the super characters on HER Game Three disk by mistake.

I saw how well she was doing using two super characters that I went ahead and used one.

The race was on. WE had found the final maze. WE were mapping it and fighting high demons and then IT been happened.

SHE beat the game before I did. I won't spoil it for you but the end of the game is pretty majestic. It took me another hour and a half to do it myself. Please don't be mistaken. (Concluded at right)

ADVENTURERS, HELP!!

By Carolyn Caine, S*P*A*C*E

Well since the newsletter arrived a bit late this month, I haven't received any clues or questions for this column. So I will begin a list of questions and steal a few questions and answers from Current Notes.

Question 1: How do you get passed the alien in the ST version of OO-Topos?

Question 2: Is there a secret to walking the pattern in 9 Princes of Amber?

The rest of this article is selected questions and answers. Reprinted from Current Notes 9/87, Q & A FOR ADVENTURERS BY JIM STEVENSON JR. In the future I hope we will have our own Q & A's.

Leather Goddesses of Phobos

Q- Anyone know how to get the headlight from the Ford car? I can't figure out how to get the headlight from the bedroom. - Del Whetter

A- To get the headlight, you have to have the sheet, rip it, and make a rope out of it. Then tell Trent to go get the headlight. - 'The Necromancer'

Transylvania

Q- How do I get the girl out of the statue after I get into the cave? Can I ride the broom anywhere useful? - 'Sci-Fi'

A- To get the girl out of the statue, you will need something you will find in Dracula's Castle. It's in the silver coffer. I'll let you figure out what you need to get it out. The broom is only for sightseeing. Sort of a side-trip. It can't be used for anything. - Bill Mehovah

Pawn

Q- I got the potion, and killed Kronos. How do I get his soul to the devil? Am I supposed to kill him? Maybe I should blackmail him? - M.C. Fresh

A- To get Kronos's soul to the devil, you have to use the aerosol can. - 'The Necromancer'

Borrowed Time

Q- I have the briefcase with the money and papers, but I can't escape from the thugs without dying! Diallo Evans

A- Go past the pile of trash, hide and give the bone to the dog. - 'The Necromancer'

Well, that's all for this month. I hope by next month there will be more questions and answers here for you and FROM you. Please send questions and/or answers to me at the S*P*A*C*E mailing address, or leave it on the S*P*A*C*E bulletin board at Butler's, or send it directly to me at: 13028 Thomas Rd. KPN, Gig Harbor, WA 98335. Hope to hear from all of you adventurers 8 bit or ST!!

I remain ST-umped!!

PHANTASIE in all three versions is a copyrighted game and the SUPER CHARACTER disk won't do you any good unless you own a copy. But if you do, and are tired of dieing, and want to see how it ends...STARBASE Game Disk G-007, in the library... Thud

PSAN Feature Articles - ST

FLASH - Q & A

For ST Telecommunications Users

By R. Kovacs, from the July '87 JACG Newsletter

Common Questions and Answers about FLASH Terminal Program.

Question #1. I have a touch tone line. How do I tell FLASH to dial using touchtone?

Answer: Go to the menu-bar and select DIAL DIRECTORY from the EDIT section. Click on the button that says 'ALTER SETTINGS' and change the Prefix to ATDT. Then hit return to exit the dialog and select SAVE from the FILE section. When the File Selection dialog box appears, click on 'Configuration' and save the configuration as the default name FLASH.CNF. This makes sure that the dialer prefix will stay as ATDT the next time FLASH is run.

Question #2. I'm trying to upload a message to Compuserve using ASCII upload, but the text appears scrambled and there are missing characters.

Answer: Change the ASCII upload setting to set METERING on. If you are using the SIG editor that gives you line numbers, then set PROMPTING on and enter ':' as the prompt character.

Question #3. All of a sudden the cursor is moving on the screen, but I can't see any text being displayed. What's happened and what can I do to fix it?

Answer: Line noise has resulted in FLASH being sent an escape sequence that has changed the text color to the white. The same error can cause text and background colors to become reversed. If you are using a color monitor then you may see strange combinations of text and background color (e.g. red text on a black background). The solution is to use the MODE command to reset the terminal emulation mode. Press on ALT-M and hit enter. This will reset the colors to their default values while leaving the terminal emulation type unchanged.

Question #4. While uploading or downloading a file using Xmodem I see error messages on the bottom line of the screen. Does this mean the file transfer was bad?

Answer: Xmodem is very good at recovering from errors due to line noise and it's quite normal to see occasional error messages such as Checksum error or Sector number error. If a fatal error occurs, FLASH will always put a message on the bottom of the screen which includes the phrase 'Xmodem Aborted'. In addition, the other computer will usually realize that a fatal error occurred and also display an error message. FLASH will typically try at least ten times to send/recieve each block of the file before giving up.

Question #5. How do I edit the FLASH DO files?

Answer: Simple! Just load them into the FLASH capture buffer and edit them in place; then save them back to disk. To embed control codes in a DO file, simply hold down the control key and press the appropriate key, (e.g. CONTROL-C shows up as an arrow facing right). To load a file into the FLASH capture buffer, select LOAD from the FILE heading of the menu bar and select CAPTURE from the dialog box that appears. To save the entire capture buffer, select SAVE from the FILE heading of the menu bar and click on the CAPTURE box. You can save just a part of the capture buffer by marking (Concluded at the right)

ADDING AN AUDIO OUTPUT

A Do-It-Yourself ST Hardware Project

Reprinted from The ACORN Kernal, July 87

I had an extra amplifier sitting around, so I figured it might be nice to use it to improve the poor sound my SM124 monitor provides.

Fortunately every ST has a normal, standard audio output signal that can be hooked up to any piece of audio equipment. Thus you can use an old amplifier and a small (or preferably large) speaker to reflect all the 'poing', 'bang', 'arrgh' and whatever other sounds programs generate.

The connection can be made without voiding your warranty. What you need is two pieces of wire, both with an alligator clip on one end and bare wire at the other. If you open the lid you can see the extremely-multi video connector. Pins run from the main PCB into the connector. From one of these pins, we're gonna get our audio signal. As you can read in your Atari manual, pin 1 is used for this signal. When you look into the connector from the outside, it's located at the top rightmost position. So from the inside the top leftmost position.

1) Find pin one and attach the alligator clip to it.

2) Use any position on the internal metal hood for the ground connection.

3) Solder the 'pin 1 signal' wire to the internal part of the RCA connector.

4) Solder the ground wire to the external part of the RCA connector.

5) Use any standard RCA plug to connect the audio signal to your amplifier.

6) Admire the GREATLY improved sound! (Any car speaker will suffice).

As you may have noticed, we haven't made any structural changes in the ST. If your computer decides to go into hibernation, you can safely remove all attachments and bring the machine to your dealer. Since my warranty has expired anyway, I made a more permanent arrangement. I drilled a hole in the back of my 1040 ST (the place where that modulator was intended to rest is ideal) and screwed in a female RCA connector. In the same run I added an extra plug for possible future video-output.

It sounds great!

out a block and saving it. The block commands are all under the BLOCK heading of the menu bar. If you want to load in a DO file for editing without clearing out all the other text in the capture buffer, select MERGE from the FILE heading of the menu bar and then select the filename to merge into the buffer. You can then edit that file and after marking it as a block, save it back to disk using the SAVE BLOCK option under the BLOCK heading of the menu bar.

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The Atari ST version of WordPerfect operates on the Atari 520 ST, 1040 ST and forthcoming Mega ST's.

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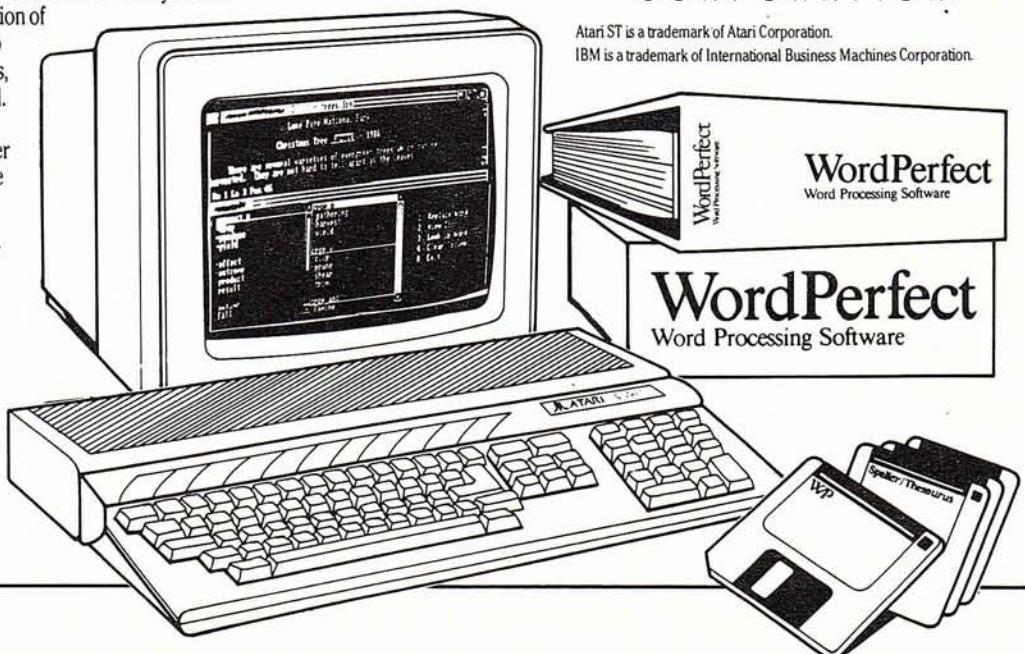
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ATARI DOS

An 8-Bit Disk Operating System Tutorial
By Rich Lyon, R-ATARI CLUB

Atari users are unique in the computer industry. In using our disk drives, we have more Disk Operating Systems (DOS) than any other computer. This article will limit the discussion to the 'official' Atari DOS's. First let's examine a standard disk. When viewed from the top it is divided into 40 rings called tracks, and each track is divided into 18 pieces called sectors. The total count is 720 sectors on a single density disk. Atari stores data in 128 byte chunks per sector. Other major computer manufacturers store data in 256 byte sectors which is double density. A 1050 modified disk drive can read and write this format if equipped with a device such as the US Doubler. The 128 byte format is, according to Atari, supposed to be more reliable than double density. A byte is 1 character or symbol of data. In looking at the figure 720×128 there should be over 92k of data on a disk. A second format technique Atari developed uses what is called enhanced density. In layout it retains the 40 tracks but increases to 26 the sectors on each track. This density gives 1040 sectors using the 128 byte format. It would appear that 133k of data could be stored on this disk. In reviewing each DOS, we will see how much storage there is and how they are laid out. Lets look at each DOS individually.

DOS 2.0

This was the first major DOS and was supplied with the 810 drive. It is a popular DOS and is well documented. DOS 2.0 is still the industry standard for most DOS compatible software. The first thing we need to look at is that the codes for DOS show the sectors numbered from 0 - 719 (720 sectors), however the computer cannot count with 0 when using file management. It sees 0 - 719 as 1 - 719 since it cannot relocate the numbers. This means that sector 720 cannot be read or written to by DOS. The remaining 719 sectors are broken up into 4 categories:

- 1) Boot Sectors - This is a machine language routine that is required to boot the disk.
- 2) Data Sectors - This contains program information, text files, or any other required data.
- 3) Directory Sectors - These contain file names, show file status, and other information.
- 4) VTOC (Volume Table of Contents) - This shows how many free sectors and a disk bit map.

BOOT SECTORS: On a standard disk the first 3 sectors are set aside as the boot area. Each of the sectors is linked sequentially and the beginning tells how many sectors must be read before loading the program. There is no file name or number used with the boot. No DOS can read or write to these sectors with either the copy or directory function. The computer used the boot as a file management system (FMS) to handle loading and running of each disk. DOS does not have to be loaded first, if the disk contains the boot, followed by some Autorun program, such as the Atariwriter Plus, which was used to finish this.

When no autorun boot program is on the disk, and you try to boot from it, the message BOOT ERROR shows on the screen.

DATA SECTORS: In DOS 2.0 the first 125 bytes of a sector are data bytes, and the last 3 are used to show file number, location of the next sector (link data), and the number of bytes in that sector. A program uses the 125 data bytes and the FMS uses the last 3 to find, trace, and load files.

DIRECTORY SECTORS: The directory is located from sectors 361 to 368 (8 sectors). Each directory sector is broken up into 8 file entries, where each entry uses 16 bytes to show file name, status (locked, unlocked, or deleted), how many sectors the file uses, and where the first sector of the file is on the disk. With 8 sectors of 8 names there can be a max of 64 file names on each disk.

VTOC: This is located at sector 360. It shows the type of DOS that formatted the disk, the total number of sectors available when formatted, the current number of free sectors, and the bit sector map. The map shows the status of every sector on the disk and whether it is in use or free.

To finish our look at DOS 2.0, we find that the disk started with 720 sectors. Then the first loss was sector 720, then 3 boot sectors, 8 directory sectors, and 1 VTOC. The result is that after removing those 13 sectors we are left with 707 sectors. By totaling 707 sectors * 125 bytes, the max storage is seen as 88k of data on a disk. A DOS 2.0 disk can have file sectors scattered anywhere it needs a free sector. This is because of the link data byte that tells where the next sector can be found.

DOS 3.0

This was the first major change to DOS and was introduced to replace DOS 2.0 and take advantage of the capabilities of the 1050 disk drive. It has an extensive HELP file so that referring to the manual for seldom used functions was not necessary, and the ability to format either single or enhanced density. At first it seemed to be just the DOS to use; however, the drawbacks showed up immediately. It cannot read or write to a DOS 2.0 disk (there is a routine to change 2.0 to 3.0 but not back) so if someone had a file in DOS 3.0 no one could use the file without DOS 3.0. None of the software developers used it. Data is stored using blocks, each block is 1024 bytes (8 sectors), it also stores data sequentially since it cannot link into empty sectors. With the block format if a file is 1025 bytes the extra byte will take up a whole block wasting over 7 sectors of storage area. The layout is completely different than DOS 2.0. The boot takes up the first 15 sectors, then sectors 16 - 23 are the directory, 24 is the VTOC, and 25 - 720 is the data area. DOS 3.0 uses all 128 bytes of each sector and no linking data is needed as files are stored sequentially. In single density, we can store 89k of data per disk, and when formatted in enhanced density we have 1016 sectors (127 blocks) free for *(Continued at bottom of the next page)*

PSAN Feature Articles - ST & 8-Bit

THE LIGHT PEN - IMPROVED

(Or How To Make It Work With ATARIGRAPHICS tm)
By Thom Lawless, R-ATARI CLUB

Yes, I know you just built a light pen a few months ago. In the mean time I have received several 'comments' on the last one. Seems it was too insensitive for use with the ATARIGRAPHICS cartridge. You know, the Lightpen program Atari put out a few years ago (seems like 10). It seems several folks' light pens have quit working, and thought this would be a good cheap replacement. It seemed like a good idea to me too, however, I don't have the ATARIGRAPHICS cartridge, or I didn't until Brad Koda from Best Electronics sent me one (FREE), seems the light pen I made up wants to stay on the right side of the screen. With this in mind and cartridge in place I rebuilt the light pen circuit. It is not a \$200.00 light pen, but for the price, you will not find a better light pen around. It works well with ATARIGRAPHICS, you may have to adjust your monitor a little for the best results, otherwise it should work perfectly. For those of you who would like to give all of this a try, you can get a 'kit' from Brad at Best Electronics, it includes the parts to build the light pen and the ATARIGRAPHICS cartridge. Just tell him you saw this article in the PSAN and he will know exactly what you need.

I will not go into details about how it works or give a demo program here. The theory and program from the July PSAN hold true for this one as well. Enjoy yourselves, I've been having a ball with mine, well not me exactly, my twin boys....

(Atari DOS - Continued)

over 133K of storage. The enhanced density feature was the only thing that made DOS 3.0 appeal to 1050 drive users.

DOS 2.5

This is the DOS to replace both DOS 2.0 AND 3.0, and has features of both. In standard density it is totally compatible with DOS 2.0. It uses the capability of DOS 3.0 to format in enhanced density. Unlike DOS 3.0 it still uses the standard 128 byte sector format. When looking at the directory of a freshly formatted enhanced density disk, the free sector count will show 999+ FREE. This is due to the inability of DOS to work with 4 digit numbers. The layout is the same as DOS 2.0 with the boot in the first 3 sectors, the directory at sectors 361 - 368, and the first VT0C at sector 360. I say first VT0C since an enhanced density disk uses a second VT0C located at 1024. The drive when looking at the directory will step to 360, then jump to 1024 to read the second half, and find the total free sectors. An enhanced density disk also can not read sector 720, or 1040, for the same reason it can not read sector 720 in single density. The losses in enhanced density also include all sectors after 1024. This totals up to 3 boot, 8 directory, 2 VT0C, and 16 other sectors since we can not see 1025 to 1040, for a total of 1010 free sectors. With the 125 byte format this gives us over 126K of storage which is still better than 88K in single density. To enable 810 owners to tell that

(Please go to the bottom of the next column)

MONITOR MASTER

ST Hardware Review by Al Cummings, STARBASE

When I bought my ST, I could not afford the 1040 with the double sided drive and color monitor. I got the 520 with a single sided drive and the monochrome monitor. Well heck at least I had an ST finally and was ready to get some of the great new games I had been drooling over. The first problem I ran into is that 80% of those same games run only in color. I had the old composite monitor and could use a TV if needed so it was not that hard to get past that little annoyance. I found a cable that hooked between the ST and the 1702 and off I went. End of story right? Well, no, not being one to want to waste anything I still wanted to use the monochrome monitor when I could, but pulling those cables were a pain in the rear of the computer and did not help the plugs any either. I had seen the ads and reviews for the MONITOR MASTER in the magazines and knew it is what I wanted. And when the local dealer got some in stock and the checkbook was off of empty, I ran in and got one. If anyone else been doing this with two Atari monitors they would have been done and happy, but as it always goes with me, it did not work. The problem seems to be minor and will work as they said it is supposed to, but it does not work as I thought it should. Does that make any sense? No, well I think if I can plug it in to the ST and have it work then it should work plugged into the switchbox, but the company did not run every wire to the plug for the color output. The needed wires go to the video and audio jacks and require another set of wires to the composite monitor. With the needed cables I will be working great and added some other options besides. The company says this only will work on 520 ST's with RF output (I thought they all had that), but it is a nice thing to fix a small headache for some of you.

Practical Solutions
6 N. Tucson Blvd.
Tucson, AZ. 85716
602-884-9612
\$49.99 list price

(Atari DOS - Concluded)

they are looking at files that can't be copied to their drive using the J disk dup option, all files containing sectors past 720 are highlighted with the symbols '< >', like this example, <FILENAME.DAT>.

General Information

Any sector editor can read single density disks of all three type DOS. In order to read DOS 3.0, it needs to be modified to see where items like VT0C and directory are located. The editor also needs to be modified to read enhanced density in either DOS 2.5 or 3.0. In a later article I will cover the patches necessary to run the ANALOG program DISKTOOL Rev. 2.0 by Tony Messina, so that it will read a DOS 2.5 disk in both densities, perform all functions. If anyone is interested I also have it modified to do some of the functions using DOS 3.0, however if you want this information please contact me through the club address.

PSAN Feature Article - 8-Bit

GENie Messages For and About ARC ON THE 8-BIT

Compiled by Wally Wong, BRACE

The following are messages from the Atari Round Table on GENie (a paid electronic network) during the first two weeks of September.. These messages pertain to the ARCHival programs written and to be written for the 8-bit Ataris. ARCHival refers to a group of file compression and extraction techniques. Typical ARCHival programs will take a group of user selected files and compress the individual files into a single file. The compression technique used will vary depending on the type of file. You then use a ARCHival Extractor program to uncompress the single file into its individual components. Last month's issue of PSAN explained how to use the programs.

ARCX12.COM is the current version everyone is using and was written by Ralph Walden who is also the author of Faster Than Light Speed C (FTLSC), and OASIS, the BBS program.

The only editing I've done is to remove time/date lines, correct spelling errors and consolidate the messages into a single paragraph by removing extra (CR)'s. All text is intact.

MARTY.A [Marty Albert] Sub: 8 Bit ARC/ARCX Info! Have you been using ARC/ARCX for the files here on the Atari 8 Bit RT? Like it? Like to see some improvements made or some features added to it? Well, you've got the right topic! Read on!

B.FIGLER Currently, I am working on an implementation of ARC for the 8-Bits. It WILL be written in ACTION!, and the source code will be released so that those who want to examine and/or modify it can.

Ralph, I don't see why you are so against ACTION!, while it lacks several key features of 'bigger' languages, it is still quite suitable for most applications. Also, last I checked ACTION! supports recursion.

Bill Wilkinson estimates that ACTION! should be 2-3 times faster than your FTLSC. I'm sure you are biased towards FTLSC because you wrote it, and there is nothing wrong with that.

My main reason for writing my own ARC is the fact that CRC errors show up VERY often for me (and others I have talked to). I even ARCDed a rather large file to RAMdisk, then ARCX it right away (using 1.2). I got CRC failure and the program wouldn't run in its unARCDed form. Since you didn't put source up anywhere, and I'm not a big fan of Atari C's anyway, I got hold of the 112K of IBM ARC source. I'm porting as much as I can over...including ALL compression methods. I am probably going to have several programs Chained together for optimum memory space.

On CIS, my efforts toward a new ARC have been welcomed. NO ONE has said 'ARC 1.2 is just fine' Everyone that has written me has said 'go to it, and good luck). Many people there have run into CRC errors as well, and they want a RELIABLE ARC.

I'm most of the way through my examination of the IBM code, the only real obstacle left is the Lempel-Zev routines which I haven't really looked at. I should begin coding in the next few weeks. Hopefully, there will be a working version in a month or so.

Currently, I am planning to give full SpartaDOS sub-directory support, as well as time/date stamping. Any other requests for features will be listened to...

The wildcard ARCXing looks to me like no problem at all, if you want it, I'll put it in.

MARTY.A [Marty Albert] Hey! That sounds great to me! In fact, I *do* like ARC/ARCX 1.2, but I know that there is always room for improvement of any system. All I can say is; Go To It! Any way that we can help out, let us know! ...Marty...

C.S.THOM [Craig] In all fairness, I believe the compression/decompression routines in Ralph's programs are ML, and the rest is in FTLSC. Of course, the additional features would be nice, and I would LOVE to see the source code. Go for it!

WALDEN 1) The version of ACTION I have does not support recursion, i.e., a function can not call itself if it places local variables on the 'stack' since that stack consists of 16 fixed page zero variables. If you have found a way to do it, great!

2) Of course Bill Wilkinson will say an ACTION version of ARC and ARCX will be faster than FTLSC since FTLSC is ACTION's main competitor. Frankly, I doubt it, but we'll be able to tell when you get your version done. I did compare ARC with a Squeeze program written in ACTION, and the ACTION version was 2-3 times slower (did Bill get his figures reversed?). But I think the Squeeze program was inefficiently written.

3) I didn't release source code because it is readily available on virtually any IBM oriented BBS complete with comments, and when I ported it I stripped all the comments out of the 8-Bit version since I had the IBM source code to work from. Because it is written in C, it is quite easy to port it to the 8-Bit -- I had the first version up and running within an hour -- something I doubt you'll be able to do in ACTION...

4) I for one certainly don't think ARC 1.2 is just fine. The reason I never updated it is that on my list of projects is a plan to implement the Lempel-Zev compression. As you may have found out by now, that requires a 25K buffer not including any buffer space for the files or the space required for the codes themselves. My plan was/is to do it entirely in assembly. I had planned on doing it when Atari released their 80 column card since I'm quite tired of programming with a 40 column screen. At this point, it's questionable if Atari ever will, and it's equally questionable if I will find the time to port the code.

5) There are a lot of very knowledgeable programmers on GENie, many of whom would be more than willing to share their information with you. No one programmer knows everything, and no one programmer will write the perfect program. When you choose a derogatory approach towards a programmer, you miss out on the opportunity to learn from their experiences and add your own unique talents and knowledge and thereby produce a product that is greater than either person could have written alone.

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C.S.THOM [Craig] Just a little note: The SQUEEZE program uses single byte PUT and GET. In fact, it gets the FILE SIZE and character count by reading it through a byte at a time. Inefficient? Heh. You did acknowledge this, but the magnitude of this inefficiency precludes using this in any comparison, I think. I like the ARC programs. They aren't perfect, but they work.

B.FIGLER First off, I didn't mean to be derogatory. I, and many others I have talked to, have had CRC errors w/ 1.2 and also want a more full-featured one... I'm not doubting your talents as a programmer, nor do I necessarily think that I am better than you... I just want to write an ARC program for myself. As somebody told me on CompuServe "It will be an educational experience, at least".

I'm sure that Bill W. is biased towards ACTION! just as you are towards FTLSC (I understand that you wrote it)... and there is certainly nothing wrong with that. I personally have never seen FTLSC, therefore cannot criticize it at all -- I can only go by what others tell me (and, really, neither you nor Bill could be labeled "impartial"!)... I REALLY don't want you to think that I'm writing an ARC program simply because I think I'm better than you (because I am undoubtedly not)... and I might very well write it in FTLSC if I had a copy and was not as familiar w/ACTION! as I am....

The SYSOPS on CompuServe have dug up those ACTION! squeeze programs, I'll be D/L'ing them soon to see just what they are like...

Your points about memory are certainly valid. The 8-Bit Atari doesn't provide the space most other computers w/ ARCs have. My current plan is a collection of files, chained together, so that I can have a full-featured, flash (y) core program that will get all the info together and then call tight, bare-bones programs in to do the dirty work... I'll soon see what this will do...

I'd just like to say again that I'm really not trying to criticize you.. After all, if it wasn't for you, the Atari 8-Bits wouldn't have ANY ARCCer at all... As for all of these speed questions, we'll just have to wait and see (I honestly don't care... I'm going to try to write the fastest ARCCer ACTION! will allow. If the FTLSC version is still faster, I won't be upset or anything... I gave it a try... It's not like we're really in competition or anything....)

B.FIGLER I reviewed my text capture and saw a couple things I hadn't responded to:

1) The recursion indeed may be a problem, one that I honestly hadn't thought of... I have mislaid my manual and couldn't read up on it, but I have left word w/ Bill & I'll see what he suggests to get around it... It's been my experience that MOST recursive algorithms can be rewritten in non-recursive form (albeit not as neat).. Whether the ARC routines fall into this category remains to be seen...

2) My reason for releasing source code is simply that if anyone wanted to look at my program or (more importantly) wanted to change something... they could. I'm sure you could pull down a IBM ARC source file (I did), but it is just so much NICER not to have to worry about using an IBM C when you have a made-for-Atari source available...

Alright, you've piqued my interest in FTLSC... Since I'm going to be getting into Turbo C at work I should probably get an Atari C with more punch than Deep Blue C (fizzle, fizzle!)... For me (and the benefit of others here)... Would you please leave

some pricing and ordering info up here? I'msure the SYSOPs will let you have a little free advertising (right!?!). I'll have a check in the mail the day after you post the info...

BOBR [Bob Retelle] We'd be more than happy to give Ralph and Light Speed C all the support we can, here on GENie, as well as anyone who's doing anything with the 8-Bit Atari computers.. We all need to stick together..!

C.S.THOM [Craig] BTW, the SQUISH program (I got the name wrong earlier) and source code are available here on GENie. Marty can give you the file numbers. heh.

MARTY.A [Marty Albert] hehe! Wrong, Craig!

The files ARE here on GENie (*I* uploaded them!), but I can't recall the file numbers!

The files AND the Action! source code are both here.

Just do a search for the keyword SQUISH and they'll turn up, and to cut it down a bit, use my address (MARTY.A) as the uploader. ...Marty...

C.S.THOM [Craig] I remember begging for the source code right after I joined GENie. Seemed the uploader was M.ALBERT, though. Heh.

MARTY.A [Marty Albert] Well.....C.ALBERT actually! (grin) The uploader address was changed to MARTY.A a few months back. Ah, power is *so* wonderful!

C.S.THOM [Craig] Darn! C.ALBERT. I remember now. But, just like in Orwell's 1984, all records of C.ALBERT have been purged!

MARTY.A [Marty Albert] heh! Just remember..... Big Brother *is* watching you.

I Meant To Do My Work Today

By Nick Berry, S*P*A*C*E

I meant to do my work today,
but my computer softly called my name,
and the cursor bounced happily across the tube,
drawing me close to this glowing cube.

Then the modem flashed bright it's L.E.D.s,
signalling data as it comes and goes,
capturing to disk hexadecimal prose.

Word processor in hand,
now into the drive,
pounding the keyboard, these words do I scribe.

Now time for a game,
playing Star Raiders so bold,
then helping Arthur Dent from the Vogon hold.

I meant to do my work today,
but a joystick jumped right into my hand,
moving it's digit to and fro,
so what could I do, but laugh and go....

The MEGA ST4 - HANDS ON! ATARI'S NEWEST COMPUTER

By Dr. Bruce D. Noonan, STARBASE

OK, you're probably asking how did this guy get ahold of a Mega ST4? As an Atari developer, I found that I was entitled to one of the first production models of this fantastic computer, including a Blitter chip, for a substantial savings. I won't mention how much, as this was without a monitor, but I understand the retail should be near \$2600. Still, when compared to the thousand dollar per megabyte standard, even at this price Atari fares much better than the competition.

The computer is sleekly styled, with all the brains in a unit 13" x 13" by 2 3/4" high. The 'box' contains a double-sided floppy drive on the right front, and the cartridge port on the left rear. The coiled keyboard cord plugs in next to the cartridge port. All the ports except for mouse and joystick ports are located on the main unit. The joystick and mouse ports are located in the keyboard rear, with 'tunnels' for the cords to each end. The main unit contains a fan which seems substantially quieter than my 20 meg. Supra Drive. A small removable plastic insert is part of the posterior wall of the main unit, which has an expansion slot inside. The case is reinforced with 9 internal supports allowing placement of the monitor on its top. There is also a compartment for installation of two AA batteries for the internal clock.

I am impressed with the lack of power-supply cords and the ease of placing the keyboard on my lap, for example. There are two foldable supports under the keyboard which allow it to be propped up to a better typing angle. I LOVE the keyboard! The keys are much more responsive, less mushy than the 520, and reminiscent of my old Atari 800.

When my Mega arrived, it did NOT have the Blitter in it. Apparently, each of the chips was undergoing individual testing. However, 13 days later the Blitter arrived with two xeroxed blurry diagrams of the case interior, and arrows pointing to two pads which needed cutting and the socket for the Blitter was indicated. I rushed to put the square Blitter chip in the socket, but was apparently unable to cut the solder on the pads completely with my x-acto knife. I say apparently, because when I reassembled the case, the ST refused to boot! Sinking feeling in my stomach, sweaty palms. I'm a software hacker, and hardware and electricity are like magic as far as I'm concerned.

Trying to maintain my cool, I bundled up the scattered parts-- case cover, base, circuit board, RF shield, keyboard and power cord, and headed for the local computer store with a plea for them to stay open and suck some solder for me. It was done at no charge. (Thanks, *Family Computers* of Lynnwood!) And best of all, there now was an indication at the bottom of the Options menu of 'Blitter'. Whewww! The possibility of frying a 520 is one thing. But a multi-thousand dollar chip barbecue was not my idea of fun!

I was anxious to try out some of my favorite software to test compatibility. Unfortunately, the first one I tried was *K-Switch* from Kuma. It seemed to boot okay but when I tried shifting from one half of ram to the other by pressing both Shift keys with the Alternate key, nothing happened. Speaking with Atari about this, I was told that Kuma used all sorts of devious means in programming which is not supported by the new ROMs. As expected, one of my other favorite programs, *Mousetrap*, also failed to work, as they poked three undocumented locations for mouse parameters which apparently have been moved in the new ROMs.

I also experienced problems with stopping a *GFA Basic* program by pressing Control-Shift and Alternate at the same time. It doesn't work. However, the compiler, editor and programs run otherwise without a hitch.

I had an old copy of *Regent Spell* with TOS.IMG on it. When I deleted the file to get more room for adding dictionary words, it ran fine on my 520ST. But the boot sector apparently gave fits to the Mega. As you know, only the directory entry is removed when a file is deleted. The file still is on the disk. Anyway, I kept getting bombs if I tried to boot with the disk. If I booted with another disk, *Regent Spell* worked just fine.

I played around loading some foreign TOS's. It seemed to take a very long time before the desktop appeared. This is due to the OS zeroing out all of memory one byte at a time after loading the TOS from disk.

So far, I have created some truly LARGE RAMdisks using *Compute!*'s recoverable RAMdisk. *Michtron's MDISK* only allows 820K maximum. *Megamax* and *Alcyon C* compilers work as usual. I did have problems with the automatic RAMdisk on the *ST TALK* disk. I could download into it and copy out of it, but then the directory became scrambled and the OS failed to recognize it being present.

Other programs running well are *Flight Simulator II* (no, the Blitter didn't seem to speed it up), *Leaderboard*, *Laser Chess*, *Monopoly* (some speed up with the Blitter 'on'), *Athena II*, *Psion Chess*, *Chessmaster 2000*, *Publishing Partner*, *Star Glider*, *Bridge 5.0*, and of course, *ST Writer 2.0*, which allows formatting of disks in the fast format with the new ROMs.

Cornerman had some problems. It would not install and boot-up failed if the DESKTOP.INF file was saved with Blitter 'on'. If the Blitter was turned on AFTER boot-up, all seemed to work as usual.

For those IBM types, it may come as a shock that *PC DITTO!* does not run IBM programs properly with the new ROMs. I tried running *LOTUS 123* on the MEGA ST4

(Continued on the next page)

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and the title screen would not appear properly and the computer locked up. PC DITTO! appeared to load and was able to load in the MS DOS off of a version 3.3 disk. It's not a major disappointment to me, however, since everything I have seen run on the old ROMs went very slowly.

I'm really looking forward to what this new machine will be capable of. Especially animations using a large RAMdisk to hold sequential picture files, and large document files. Atari has finally produced a very solid business machine with the MEGAS. I am interested to know if PC DITTO! runs on the Mega. I plan to try it in the near future. I'll let you know.

MEGA ST COMPUTER

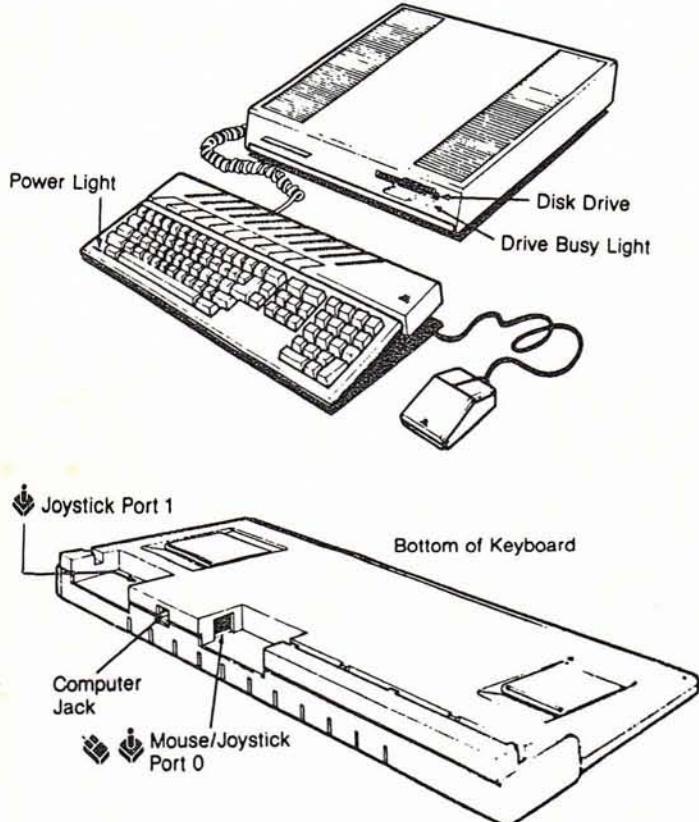
Computer

Processor

MC68000, 32-bit internal, 16-bit external architecture; 24-bit address bus; 8 MHz frequency

Memory:

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MEGA ST2™	2 megabytes (2,097,152 bytes) of RAM; 192 kilobytes (196,608 bytes) of ROM
MEGA ST4™	4 megabytes (4,194,304 bytes) of RAM; 192 kilobytes (196,608 bytes) of ROM



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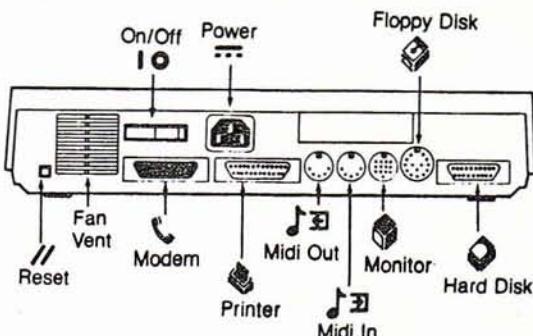
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The Computer's Back Panel

Many types of external devices, called peripherals, can be attached to the back panel of your MEGA ST Computer.



Graphics courtesy of
The LA-ACE Newsletter, 9/87

THE TASKMASTER

Kid Control With Your Trusty 8-Bit Computer!
By Penny Ormston, R-ATARI CLUB

After spending a long, hot summer with all the kids home day after day (and except for the baby, all were always bored and had nothing to do, or so they would say, I finally found a way to make peace -- sort of.

For one thing, the kids always wanted to play games. Ok, that's fine with me, I enjoy computer games also. However, they would tend to take over one of the computers (or both, if I wasn't using one) for hours on end! They would fight and argue over who got to play the most, and generally drove me nuts. I limited their game time, but they still managed to squeeze in an extra few minutes here and there.

So I had an idea, that if they would do extra work for me around the house (mainly washing dishes, as I personally hate this job), they would get extra game time. This worked out pretty well, but only one person would be able to do the dishes, and the others would feel it was unfair. So, I came up with another idea. I would give a point value for each and every job they might do for me around the house. They could earn points to play games. If they didn't have enough points for the day, they couldn't play games -- as simple as that.

Well, that was a fine idea (or so I thought) except what happens when someone gets points for cleaning up a room, then messes it up and cleans it up again? Now, is that fair? Should they get extra game time for cleaning up after themselves constantly? No way!! They would never run out of game time that way! My solution; have a list of things that would make them lose points. And points are lost more easily than they are gained on particularly bratty days. One of the items on the 'SUBTRACTIONS LIST' is not cleaning up a mess you made.

Another problem I have frequently with my four kids, is 'accidents'. Whenever someone hurts someone else, or breaks something, etc.. It is always an 'accident', or so I'm told. I have the 'accident' on the subtractions list, and the person will only lose 10 points if I really feel that it was an accident. Hurting other people, breaking things, and LYING all lose much more points.

Even with the subtractions, there were still a great deal of points to be found left for game playing. I decided that the best way to utilize the 'extra points' was to make it so that the kids could 'advance a level' just like in most adventure games. The person who was the highest level would be the highest in 'rank' and could boss the others around during clean up time. (This works out very well). As an added incentive, I decided to make it so that they would get an allowance based on their level. For my kids, that means they get a quarter for each level. It takes twice as many points to advance from level 1 to level 2, and twice as many from level 2 to level 3, and so on...

In order to keep track of all this, I wrote the TaskMaster program.

The TaskMaster lets you create the beginning files, one file per child. Each file has the persons name, score (total points), level, and a PASSWORD. The password can be any word or combination of letters you choose. However, you cannot use control codes in it (using the arrows, for instance) or you will mess it up.

When the file is read back in, the program will ask you for the password, and you must then type it in before you can do anything else. This is a real plus, because it can keep the kids from altering the files themselves (assuming that they don't know the password, of course!). The score and level both start off at 0.

You are then asked for a FILENAME for this person's record. I just use the name of the child. Do not add the device handler, or an extension. These are added by the program. The file will then be written to drive 1 with a '.DAT' extension.

When you are through creating the new files, press N for NO when it asks if you need to create a file. You will then be given a directory of all the '.DAT' files on drive 1. You may then enter the FILENAME of the data file you want. Once again, do not include the device handler or the extension. There is practically no error trapping in the program, so make sure that you type in the filename correctly.

*** NOTE -- I deliberately left out traps, for the very same reason that I put in the PASSWORD. To keep the kids from changing things on their own.*

Once the data from the file is read into memory, it will ask you for the password. If you do not give the correct password, the bell will sound and you will be asked for the password again. Once the password is entered correctly, (caps, and inverse count!) you will be taken to the Main Menu.

From here, you may go to other menus, including one for awarding points for jobs done, and one for subtracting points for no-no's. After each selection in either of these categories, you will see a screen informing you of the following:

1. Person's name
2. Their total points
3. Their level
4. Their allowance total

You will be given the option to return to the menu you were just on, or else return to the Main Menu.

The jobs on the 'CHORE LIST' can be easily changed to suit your own needs. I put things that were appropriate for my own family, and had to be a bit careful in the wording -- for example fetching something is great, up to a point. My kids know me pretty well, and it can be a bit silly to have someone bring me a glass of icewater every 5 minutes. Not only can I not drink that much all day long, but it makes an awful lot of dirty glasses! So I made it

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fetching something when asked. The 'SPECIAL JOB' can be for anything that isn't on the list and you will be prompted for an amount. You can enter ANY amount, and this is where it is particularly helpful to have the password in each file. It does give you a little control of the situation.

By the same token, the 'SUBTRACTIONS LIST' works in the same way. You can put in your own 'subtractions' in place of mine. The 'something really bad' option will allow you to subtract ANY amount of points, and can bring someone all the way down to 0 if you feel it is necessary.

You may just press ESCAPE to leave either the Chore or Subtractions Menus. Pressing ESCAPE will bring you back to the Main Menu.

Also on the Main Menu is the option to subtract for game time. The way I have it set up, it subtracts 15 points for each half hour of game time. This seems fair to me, but in your household something else may seem better. If no games were played, or you got here by accident, press 0 for the time and you will go back to the Main Menu.

The last two options on the Main Menu are 'Go on to the next person' and 'End program'. Selecting either of these options will cause the program to automatically save the file you were working on. If you selected 'End program', then the program will end as soon as the save is completed. If you selected 'Go on to the next person', you will once again be shown the '.DAT' files available on drive 1, and you can select a new file for changes. Once again, you will have to enter the correct password--and remember each file can (and should) have its own separate and distinct password.

Whew! I think that's about it! This sure seems like a lot of explaining for such a simple program. I sure hope this will be of some benefit to all of you who are parents.

PROGRAM LISTING

(EDITOR'S NOTE: All underlined characters are to be typed in inverse. The '/' is the SHIFTed '=' key.)

```
10 REM BY PENNY ORNSTON
20 GRAPHICS 0:POKE 82,0:POKE 710,0
30 DIM NAME$(20),FILE$(15),LV(20),PW$(10),F$(8),
  PAS$(10),HR(3),FI$(13)
40 ? CHR$(125)
50 ? :? :? :? :? ' Do you need to create a new file?
60 ? :? :? ' Yes or No? :? :? :?
70 POKE 764,255
80 K=PEEK(764):IF K=255 THEN 80
90 POKE 764,255:IF K=35 THEN 240
100 IF K()43 THEN 80
110 ? ' Persons name, please ';;INPUT NAME$
120 ? ' PLEASE GIVE A PASSWORD FOR THIS FILE';;
  INPUT PW$
130 SCORE=0:LVL=0
140 ? ' Filename (please use a different file';;
  ? ' for each person). Do not include'
150 ? ' the device handler or extension. These';;
  ? ' will be added for you.';;INPUT F$
160 GOSUB 220:GOSUB 170:GOTO 40
170 ? ' Now writing data to ';;FILE$
```

```
180 CLOSE #1:OPEN #1,8,0,FILE$
190 ? #1;NAME$?: #1;PW$?: #1;SCORE?: #1;LVL
200 CLOSE #1
210 RETURN
220 LF=LEN(F$)
230 FILE$(1,3)='D1:'::FILE$(4,3+LF)=F$:
  FILE$(4+LF,7+LF)='.'::RETURN
240 ? CHR$(125):? :? :? ' Data files on drive 1:':
  ? :?
250 CLOSE #1:OPEN #1,6,0,'D:*.DAT'
260 TRAP 290
270 INPUT #1,FI$?: FI$?:?
280 GOTO 270
290 CLOSE #1
300 ? :? :? :? ' CHOOSE YOUR FILE (DO NOT INCLUDE'::
  DEVICE HANDLER OR EXTENSION!) ';;
  INPUT F$
310 GOSUB 220
320 CLOSE #1:OPEN #1,4,0,FILE$
330 INPUT #1;NAME$
340 INPUT #1;PW$
350 INPUT #1;SCORE
360 INPUT #1;LVL
370 CLOSE #1
380 GOSUB 1150
390 GOTO 1180
400 GOSUB 420:SCORE=SCORE+SC:GOSUB 1470
410 GOTO 400
420 ? CHR$(125):? ' CHORE LIST '
430 ? ' QRRRRRRRRRRRRRRRRRRWRRRRRRRRRRRRRRRE'::
  REM Press [CONTROL] & [letter shown] for each
  printed character in this line.
440 ? ' [A] Wash dishes [B] Dry dishes '
450 ? ' [C] Make Mom's [D] Clean computer '
460 ? ' bed [E] Vacuuming [F] Dusting '
470 ? ' [G] Sweeping [H] Watching baby '
480 ? ' [I] Clean your [J] Clear table '
490 ? ' room [K] Set table [L] Take out trash '
500 ? ' [M] Clean a room [N] Get the dirty '
510 ? ' clothes [O] Fetching item [P] Homework done '
520 ? ' when asked [Q] Put clothes [R] Brush teeth/ '
530 ? ' away [S] Yard work [T] SPECIAL JOB!! '
540 ? ' [Z] ZRRRRRRRRRRRRRRRRXRRRRRRRRRRRRRC'::
  REM Press [CONTROL] & [letter shown] for each
  printed character in this line.
550 ? ' Select job done: '
560 CLOSE #2:OPEN #2,4,0,'K:'
570 GET #2,K
580 IF K=27 THEN POP :GOTO 1180
590 IF K=ASC('A') OR K=ASC('S') THEN SC=25:RETURN
600 IF K=ASC('B') OR K=ASC('H') OR K=ASC('I') THEN
  SC=10:RETURN
610 IF K=ASC('C') OR K=ASC('D') OR K=ASC('E') OR
  K=ASC('F') OR K=ASC('G') OR K=ASC('J') THEN SC=5:
  RETURN
620 IF K=ASC('N') OR K=ASC('O') OR K=ASC('P') OR
  K=ASC('Q') OR K=ASC('R') THEN SC=5:RETURN
630 IF K=ASC('M') THEN SC=15:RETURN
640 IF K=ASC('K') OR K=ASC('L') THEN SC=3:RETURN
650 POSITION 9,23:? 'Points';
660 INPUT SC
670 RETURN
```

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```

770 GOSUB 810
780 IF SC)SCORE OR SCORE<0 THEN SCORE=0:GOTO 800
790 SCORE=SCORE-SC
800 GOSUB 1470:GOTO 770
810 ? CHR$(125)
820 ? . . . . . SUBTRACTIONS LIST'
830 ? . . . . . OR'
840 ? . . . . . THINGS YOU SHOULDN'T DO'
850 ? . . . . . =====
860 ? . . . . .
870 ? . . . . [A] Didn't put disks away,
880 ? . . . . [B] Something 'accidental',
890 ? . . . . [C] Forgetting to put school
900 ? . . . . things away
910 ? . . . . [D] Disobeying orders
920 ? . . . . [E] Making a mess and NOT
930 ? . . . . cleaning it up
940 ? . . . . [F] Breaking something
950 ? . . . . [G] Hurting someone
960 ? . . . . [H] LYING
970 ? . . . . [I] Something really bad
980 ? . . . . =====
990 ? . . . . .
1000 ? . . . . Which one?';
1010 CLOSE #2:OPEN #2,4,0,"K"
1020 GET #2,K
1025 IF K=27 THEN POP :GOTO 1180
1030 IF K=ASC("A") OR K=ASC("B") THEN SC=10:RETURN
1040 IF K=ASC("C") THEN SC=20:RETURN
1050 IF K=ASC("D") THEN SC=30:RETURN
1060 IF K=ASC("E") OR K=ASC("F") OR K=ASC("G") THEN
    SC=50:RETURN
1070 IF K=ASC("H") THEN SC=100:RETURN
1080 IF K()ASC("I") THEN 1020
1090 GOTO 740
1100 ? CHR$(125)
1110 ? . . . . . GAME TIME IS COUNTED IN HALF '
1110 ? . . . . . HOUR INCREMENTS ONLY.' :? :? :? :?
1120 ? . . . . . HOW MANY TOTAL HALF HOURS OF GAME PLAY':? :
1120 ? . . . . . ? "DID ";NAME$;" HAVE":;INPUT HR
1130 SC=15*HR:IF SC)=SCORE THEN SCORE=0:GOTO 1180
1140 SCORE=SCORE-SC:GOTO 1180
1150 ? . . . . . Please give password: ;:INPUT PASS
1160 IF PASS()PW$ THEN ? })}WRONG}}}:GOTO 1150:REM
    Press [CONTROL] and [2] for each } symbol shown.
1170 RETURN
1180 ? CHR$(125)
1185 REM In lines 1190-1370 press [Inverse] then
    [CONTROL] & [letter shown] for each of the
    underlined characters.
1190 ? . . . . . QWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWE"
1200 ? . . . . . SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSD"
1210 ? . . . . . SSSSSSSS MENU CHOICES SSSSSSSSD"
1220 ? . . . . . SXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXSD"
1230 ? . . . . . D . . . . . D
1240 ? . . . . . D . . . . . D
1250 ? . . . . . D 1. Go on to the next person . . . . . D
1260 ? . . . . . D . . . . . D
1270 ? . . . . . D 2. List of Chore points . . . . . D
1280 ? . . . . . D . . . . . D
1290 ? . . . . . D 3. List of Subtractions . . . . . D
1300 ? . . . . . D . . . . . D
1310 ? . . . . . D 4. Game Time subtraction . . . . . D
1320 ? . . . . . D . . . . . D
1330 ? . . . . . D 5. End program . . . . . D
1340 ? . . . . . D . . . . . D
1350 ? . . . . . SWWWWWWWWWWWWWWWWWWWWWWWWWWWWWE"
1360 ? . . . . . SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSD"
1370 ? . . . . . XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXC"
1380 ? . . . . . Make your choice"
1390 CLOSE #2:OPEN #2,4,0,"K"
1400 GET #2,K

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```

1410 IF K=ASC("1") THEN GOSUB 170:GOTO 240
1420 IF K=ASC("2") THEN GOTO 400
1430 IF K=ASC("3") THEN GOTO 770
1440 IF K=ASC("4") THEN GOTO 1100
1450 IF K()ASC("5") THEN 1400
1460 GOSUB 170:END
1470 ? CHR$(125)
1480 IF SCORE<200 THEN LVL=0:GOTO 1520
1490 IF SCORE>200 THEN LVL=1
1500 LV(1)=200:FOR L=2 TO 20:LV(L)=2*LV(L-1):
    IF SCORE>=LV(L) THEN LVL=L
1510 NEXT L
1520 POSITION 20-LEN(NAME$)/2,3:? NAME$
1530 POSITION 7,7:?"TOTAL POINTS===== ";SCORE
1540 POSITION 9,10:?"LEVEL===== ";LVL
1542 POSITION 6,13:?"ALLOWANCE===== ";LVL/4
1550 POSITION 4,19:
    ? "Press 1 to return or 2 for menu"
1560 POKE 764,255
1570 K=PEEK(764):IF K=255 THEN 1570
1580 POKE 764,255
1590 IF K=31 THEN RETURN
1600 IF K=30 THEN POP :GOTO 1180
1610 GOTO 1560

```

(Expanded Memory Tester - Continued)

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470 DATA 0,32,86,228,174,247,146,189,248,146,141,189,
    147,169,147,141,69,3,169,181,141,68,3,173,180
480 DATA 147,141,72,3,162,0,32,86,228,96,169,148,141,
    69,3,169,48,141,68,3,173,47,148,141,72
490 DATA 3,162,0,32,86,228,96,169,148,141,69,3,169,
    51,141,68,3,173,50,148,141,72,3,162,0
500 DATA 32,86,228,96,32,68,218,173,244,146,133,212,
    165,204,133,213,32,170,217,32,230,216,96,169,148
510 DATA 141,69,3,169,31,141,68,3,173,30,148,141,72,
    3,162,0,32,86,228,76,206,145,227,231,235
520 DATA 239,195,199,203,207,163,167,171,175,131,135,
    139,143,225,229,233,237,161,165,169,173,193,197,
    201,205
530 DATA 129,133,137,141,0,0,0,0,0,49,50,51,52,32,
    49,32,50,32,51,32,52,32,53,32
540 DATA 54,32,55,32,56,32,57,49,48,49,49,49,49,50,49,
    51,49,52,49,53,49,54,49,55,49,56
550 DATA 49,57,50,48,50,49,50,50,50,51,50,52,50,53,
    50,54,50,55,50,56,50,57,51,48,51
560 DATA 49,51,50,0,85,170,255,0,105,32,32,32,32,32,
    32,32,32,77,69,77,79,82,89,32,84
570 DATA 69,83,84,69,82,32,86,69,82,46,32,49,46,49,
    29,155,32,32,32,32,32,32,32,32,32,32,32,32
580 DATA 32,32,32,32,32,32,32,66,89,29,155,32,32,32,
    32,32,32,32,32,32,32,84,104,111
590 DATA 109,32,76,97,119,108,101,115,115,29,155,32,
    32,32,32,32,32,32,32,32,67,79,80,89
600 DATA 82,73,71,72,84,32,49,57,56,55,29,29,29,155,
    8,32,69,82,82,79,82,32,155,10,32
610 DATA 80,65,83,83,32,35,32,32,155,17,32,76,79,67,
    65,84,73,79,78,32,32,32,32,32,32,32,32,32,32,32
620 DATA 32,155,30,29,29,29,29,32,32,32,32,32,32,32,32,
    32,32,32,32,32,32,32,32,32,32,32,32,32,32,32,32,32
630 DATA 79,77,80,76,69,84,69,155,173,131,147,201,
    111,208,3,76,0,144,76,119,228,11,32,66,65
640 DATA 78,75,32,35,32,32,32,155,9,32,70,73,76,76,
    73,78,71,155,10,32,86,69,82,73,70
650 DATA 73,78,71,155,16,32,78,79,32,69,88,84,82,65,
    32,82,65,77,33,33,155,2,28,28,1
660 DATA 28,2,125,155,224,2,225,2,240,147

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EXPANDED MEMORY TESTER

For Memory Upgraded XL/XE Computers
 (C)1987 By Thom Lawless, R-ATARI CLUB

The following program will check the 'extra' memory in most expanded XL's, and XE's with or without expanded memory. I say most as I don't have every upgrade ever published or manufactured. The only known exception at present is ICD's MIO board. The memory checker follows the 'standard' set by Bucholz's 256K 800XL, Scott Peterson's 320-576K XE and my own 320-576K XL upgrades. This program will also check a Bucholz upgrade properly.

The program is almost a must if you have an expanded memory computer. You never can tell if that 'glitch' in your saved file was an accident or a problem in the ramdisk. This program is pretty through, if there is a problem this should find it for you. I always find it a comfort when I run a program like this and get the, 'all clear', your RAM is good report.

The program is 'memory smart', i.e. it checks first to see how much memory you have and then checks that which it finds. It is a 4 pass checker. The first pass zero's all memory, the second pass puts in a checkerboard pattern (01010101). The third pattern is also a checkerboard (10101010). The forth and final pattern is all one's. After it has completed the tests you may press any key to resume normal operation. Be advised that anything that was in the 'extra' memory banks has now been completely wiped out. During the testing phase the cursor will be 'flashing' rather quickly, this is so that you know it's working. Also the program reports it's progress on the screen so you will know exactly where it is and what it is doing. When testing is complete it will tell you. If there are any errors you will see where they are and what 'pass' they occurred on. You may change line 170, the 'D:AUTORUN.SYS', to whatever you like, so long as you know that if you do, it will have to be binary loaded from DOS to run.

This program is not public domain, it is copyrighted. I have released it as FREEWARE in it's present form. It may be freely copied or distributed in this manner, provided the copyright notice is left intact. The source has been released as SHAREWARE. Further information on obtaining the source code can be obtained by contacting the author. (Ed., write: Thom Lawless, 216 E. Cove Ave, Freeland, WA 98249 or phone (206) 321-5127.)

PROGRAM LISTING

```

10 REM A Memory Test Program
20 REM By Thom Lawless
30 REM Copyright 1987
40 REM Under the Freeware Agreement
50 REM This program may be copied
60 REM as long as the copyright is
70 REM kept intact.
80 REM For all expanded ATARI XL's
90 REM and XE's with 'standard'
100 REM or expanded memory.
110 REM When testing is complete
120 REM press any key to continue.
130 A=0:B=0:? CHR$(125)

```

```

140 FOR Z=1 TO 1096:READ A:B=A+B:NEXT Z:RESTORE:
141 IF B()>119119 THEN ? :? :
142 ? ' ERROR IN DATA LINES!!':? :END
150 ? 'Insert Disk for AUTORUN.SYS in':? 'Drive 1':
151 POKE 764,255
160 IF PEEK(764)=255 THEN 160
170 CLOSE #2:OPEN #2,8,0,"D:AUTORUN.SYS"
180 FOR Z=1 TO 1096:READ A:PUT #2,A:NEXT Z
190 CLOSE #2:?:? :? ' DONE!!'
200 END
210 REM PROGRAM DATA
220 DATA 255,255,65,0,65,0,0,0,144,54,148
230 DATA 120,169,148,141,69,3,169,53,141,68,3,173,52,
240 DATA 148,141,72,3,169,0,141,73,3,169,11,141
250 DATA 66,3,162,0,32,86,228,169,147,141,69,3,169,
260 DATA 66,141,68,3,173,65,147,141,72,3,162,0
270 DATA 32,86,228,173,1,211,141,245,146,141,246,146,
280 DATA 24,216,169,64,133,204,169,0,168,170,133,203,141
290 DATA 247,146,141,243,146,141,244,146,162,1,189,
300 DATA 211,177,203,201,1,208,3,76,186,146,162,1,
310 DATA 189,210,146,141,1,211,169,3,145,203,162,5,189
320 DATA 210,146,141,1,211,177,203,201,3,208,4,162,4,
330 DATA 208,60,162,14,189,210,146,141,1,211,169,2
340 DATA 211,177,203,201,1,208,3,76,186,146,162,1,
350 DATA 189,210,146,141,1,211,177,203,201,2,
360 DATA 240,30,162,30,189,210,146,141,1,211,169,4,145
370 DATA 203,162,14,189,210,146,141,1,211,177,203,
380 DATA 201,4,208,8,162,16,208,6,162,12,208,2,162,32
390 DATA 142,242,146,169,148,141,69,3,169,10,141,68,
400 DATA 3,173,9,148,141,72,3,162,0,32,86,228,32
410 DATA 52,146,174,247,146,189,60,147,141,64,147,
420 DATA 169,0,168,170,189,210,146,141,1,211,173,64,147,145
430 DATA 240,203,200,192,0,208,249,240,0,230,204,165,204,
440 DATA 201,128,240,8,160,0,173,64,147,76,249,144,169
450 DATA 238,247,146,32,123,146,32,145,146,169,64,
460 DATA 133,204,76,227,144,169,147,141,69,3,169,210,141,
470 DATA 68
480 DATA 3,173,209,147,141,72,3,162,0,32,86,228,88,
490 DATA 173,245,146,141,1,211,173,252,2,201,255,240
500 DATA 242,96,140,244,146,142,243,146,169,147,141,
510 DATA 69,3,169,172,141,68,3,173,171,147,141,72,3,162
520 DATA 0,32,86,228,32,52,146,32,167,146,160,4,162,
530 DATA 4,177,243,9,128,157,202,147,224,0,240,5
540 DATA 136,202,76,2,146,169,147,141,69,3,169,192,
550 DATA 141,68,3,173,191,147,141,72,3,162,0,32,86
560 DATA 228,32,123,146,32,123,146,172,244,146,174,
570 DATA 243,146,96,173,243,146,10,170,24,189,252,146,141,
580 DATA 5
590 DATA 148,232,189,252,146,141,6,148,169,147,141,
600 DATA 69,3,169,254,141,68,3,173,253,147,141,72,3,162

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(Listing continued on Preceding Page)



BEST ELECTRONICS

HARDWARE:

520ST/1040ST/SF314/SF354/SH204

Atari Service Manual			
SF314/SF354 Disk Drive	C070624	\$40.00	
Atari Service Manual 520ST Computer	C026118	40.00	
Atari Service Manual 520ST/1040ST Computer	C020118	50.00	
Atari Service Manual SC1224 Monitor	C070433	40.00	
Atari Service Manual XMM801 Printer	C070435	40.00	
Atari Service Manual SMM804 Printer	C070434	40.00	
Atari ST Diagnostic Cartridge	CA026297	80.00	
Atari ST Diagnostic Assembly complete, Cartridge and Documentation (ST, SF354, SF314, SC1224, SMM804, Loop Back Cables)	C026287	350.00	
ST EPROM Cartridge 64K/128K/256K/ROMS	CA030701	15.00	
ST Mouse Mat	6.00	- 8.00	
ST Mouse House		6.50	
ST Clocks	CALL		
ST One to Four Meg RAM Upgrades	CALL		
Sams Computerfacts Service Manual 520ST	40.00		
520ST Mother Board	CA070052	CALL	
520ST Power Supply	C070099	60.00	
520ST 7 Pin DIN Rt. Angle Power Receptacle	C070135	2.50	
520ST Power Switch ..C061022/C070006/C061913	1.25		
520ST Keyboard Assembly	CA070022	90.00	
520ST Owners Manual	C026051	6.00	
520ST Bottom Housing	CA070016	CALL	
520ST Top Housing	CA070020	CALL	
520ST Dust Cover		8.50	
520ST/1040ST Switch Reset	C070119	2.50	
520ST/1040ST R.F. Modulator	C070491	50.00	
520ST/1040ST 13 Pin Monitor Rt. Angle Receptacle	C070134	3.00	
520ST/1040ST 14 Pin Disk Drive Rt. Angle Recept.	C070131	3.00	
520ST/1040ST 13 Pin Monitor Connector		4.00	
520ST/1040ST 14 Pin Disk Drive Connector		4.50	
520ST/1040ST Rt. Angle Cartridge Connector		C070129	4.00
520ST/1040ST DB-19 Rt. Angle Hard Disk Connector		C070130	4.00
520ST/1040ST DB-25 Male Modem Connector		C070132	1.50
520ST/1040ST DB-25 Female Printer Connector		C070133	1.50
520ST/1040ST Keyboard Keypad Kit	C070258	22.00	
1040ST Internal Power Supply	CA070059	68.00	
1040ST Keyboard Assembly	CA070057	90.00	
1040ST Mother Board	CA070097	CALL	
1040ST Dust Cover		8.50	
68 Pin Square I.D. Socket	C070120	6.00	
ST I.C. Retention Clip, 69 Pin Square I.C. Socket	C070718	.50	
3 1/2" SSDD Epson Drive Transport	C070219	128.00	
3 1/2" DSDD Newtronics Drive Transport	C070350	165.00	
3 1/2" DSDD Chinon Drive Transport	C070352	165.00	
SF300 Series Disk Drive Power Supply	C070091	45.00	
SF300 Series Drive I/O Board	CA070063	40.00	
SF354/SF314 Disk Drive Dust Cover		8.50	
SF354 Owners Manual	C026052	2.00	
3 1/2" Dysan Alignment Disk, SSDD		40.00	
3 1/2" Dysan Alignment Disk, DSDD		55.00	
ST Series Mouse	CA070025	50.00	
ST Series MIDI 5 - 6 Ft. Cable		6.00	
1040ST/SH204/SM124 Power Cord	C070349	6.50	
1040ST/SH204 Hard Disk 1 to 2"Y" Power Cord		10.00	
SH204 Hard Disk I/O Cable	C026170	24.00	

CONNECTOR/RECEPTACLES

5 Pin DIN Rt. Angle Receptacle (Monitor/ST Midi)	C014388	\$ 1.00	
7 Pin DIN Rt. Angle Receptacle(XL/XE)	C010448	1.25	
7 Pin DIN Connector (XL/XE Power Supply)		1.20	
7 Pin DIN 520ST Rt. Angle Power Receptacle	C070135	2.50	
9 Pin DB-9F Joystick Receptacle	C010448/FK100307/C019062	1.10	
9 Pin DB-9F Female Connector (850) ... C015581-09	C015581-09	1.30	
DB-19 520ST/1040ST Rt. Angle Hard Disk Connector	C070130	4.00	
DB-19 520ST/1040ST Solder Cup Connector		3.50	
DB-19 520ST/1040ST Hoods		1.50	
DB-25 520ST/1040ST Modem Connector ... C070132	1.50		
13 Pin I/O Cable Connector		3.00	
13 Pin I/O Receptacle	C012995	2.50	
13 Pin 520ST/1040ST Monitor Connector		4.00	

13 Pin 520ST/1040ST Rt. Angle Receptacle	C070134	3.60	
14 Pin 520ST/1040ST Disk Drive Connector		4.50	
14 Pin 520ST/1040ST Disk Drive Receptacle		3.75	
15 Pin DIN Joystick Receptacle(5200) ... C018013	C018013	1.30	
15 Pin DIN Female Connector(850) ... C015581-15	C015581-15	2.00	
16 Pin Double-sided Header w/Gold Plated Pins		1.25	

CABLES

1 Foot I/O Cable (drive to drive)		\$10.00	
Atari 3 ft. I/O Cable	CA014122	10.00	
CX81 6 ft. I/O Cable	CA015900-01	12.00	
CX89 Color Monitor Cable		9.00	
Atari CX86 825 Printer Cable	CA015900-02	15.00	
Atari CX87 Modem Cable (DB-9 to DB-25)	CA015900-03	12.00	
Atari CX88 Terminal Cable (DB-9 to DB-25)		13.00	
850 to Printer Cable (DB-15 to Centronics Connector)		15.00	
Monitor Cable (5-pin DIN to 4 RCA connectors)		4.50	
"Y" Paddle Cable	C010810/FK100305	3.00	
Joystick Cable (6 cond.) ... CA018145/FK100306	1.50		
Joystick Cable (8 conductor 1-inch leads, #8 wire clipped)		3.00	
Joystick Cable (9 conductor)		3.95	
Joystick "Y" Cable Adaptor (1M to 2F)		8.00	
1040ST 6" - 12" Joystick/Mouse Ext. Cable		8.00	
1040ST 12" Joystick/Mouse "Y" Cable (2M to 1F)		8.00	
520ST/1040ST 3 ft. Disk I/O Cable	C070139	16.00	
520ST/1040ST 6 ft. Disk I/O Cable		18.00	
520ST/1040ST Monitor Cable	C070264	20.00	
520ST/1040ST 6 ft. Printer Cable		10.00	
520ST/1040ST 12 ft. Printer Cable		18.00	
520ST/1040ST 6 ft. Modem Cable		12.00	
520ST/1040ST Hard Disk I/O Cable	C026170	24.00	
ST Series Midi 5 - 6 ft. Cable		6.00	
Midi or Monitor 6 ft. Extension Cable		6.00	
3 ft. to 15 ft. Coiled Joystick/Paddle Extension Cable (1M to 1F)		10.00	
6 ft. or 12 ft. Joystick/Paddle Ext. Cable		5.00 / 7.00	
10 ft. or 20 ft. Joystick/Paddle Ext. Cable		6.00 / 8.00	
850 to Printer 6 ft. Ext. Cable (DB-15F to DB-15M)		9.00	
850 to Printer 12 ft. Ext. Cable (DB-15F to DB-15M)		12.00	
5200 Controller Cable Assembly	CA018145	4.90	
6 ft. or 12 ft. 5200 Joystick Ext. Cables		9.00 / 12.00	

HARDWARE: Controllers/Accessories**

Atari Paddles	CX30	\$12.00	
Atari Paddle Label	C012766	.20	
1 Meg Potentiometer for Paddles	C010464	1.00	
"Y" Paddle Cable	C010810/FK100305	3.00	
Paddle Knob	C010457	2.00	
Paddle Fire Button	C010739	.75	
Paddle Switch	CA011620	.75	
Atari Joysticks (ea.) Call for any price change	CX40	9.00	
Atari Remote Control Joysticks	CX42	30.00	
Atari Proline Joystick	CX24	(ea.)	12.00
Joystick "Blaster" Module w/Adjustable Fire Rate Control		4.00	
Wico Arcade Heavy Duty Joystick (Requires mounting)		12.00	
Arcade Heavy Duty Fire Button	CALL		
Atari Joystick Rubber Boot	C012109	.75	
Atari Joystick Handle	C012116	1.25	
Atari Joystick Rubber Feet (Set of 56) ... 88-1004		1.30	
Atari Joystick P.C. Board ... CA015396/CA012111		1.25	
Atari Joystick Rebuild Kit (1 p.c. board & handle)		2.00	
Joystick/Paddle "Y" Cable (1M to 2F)		8.00	
Atari Joystick Cable (6-cond.) ... CA014058/FK100306		1.50	
Atari Joystick Cable (8-conductor, #8 wire clipped/1-inch leads)		3.60	
6 ft. or 12 ft. Joystick/Paddle Ext. Cable		5.00 / 7.00	
10 ft. or 20 ft. Joystick/Paddle Ext. Cable		6.00 / 8.00	
3 ft. to 15 ft. Joystick/Paddle Coiled Ext. Cable		10.00	
Atari 2600 CX55 Keyboard Controllers		CA012758 pr.	8.00
5200 Joystick Controller		CX52 ea.	27.00
5200 Joystick 6 ft. or 12 ft. Extension Cables		9.00 / 12.00	
Atari 850 Interface		A850	125.00
Atari 1050 Disk Drive (Call for Price Changes)		A1050	159.00
Sams Computerfacts Service Manual			
1050 Disk Drive			20.00
1050 Dust Cover			8.50
Atari XM301 300 Baud Direct Connect Modem			XM301
			49.95

Atari 300/1200 Baud Modem	SX-212	99.00	
Atari 80 Column Unit w/Parallel Printer Port For use w/High Resolution Monitors	XEP-80	7.00	
CX85 Keypad	CX85	12.00	
CX85 Keypad Field Service Manual	FD100176	3	
Atari Light Pen	CX75	4.00	
Atari Touch Tablet	CX77	50.00	
Atari Touch Tablet Mylar		2.00	
Atari Touch Tablet Pen		9.00	
ICD PR Connection		79.00	
ICD 1050 US Doubler		39.00	
ICD 1050 US Doubler w/Sparta DOS Construction Set		69.00	
ICD Sparta DOS Construction Set		39.00	
ICD 800XL/1200XL 256K Rambo XL (Less RAM)		39.00	
ICD R-Time 8 Clock Cartridge w/Battery		69.00	
ICD Sparta DOS X Cartridge (DOS Cart)		69.00	
ICD Multi I/O Box, RAM Disk, Parallel Printer Port, Modem Port Spooler, Hard Disk Interface (XL/XE Computers)		256K Model	199.00
		1 Meg Model	349.00
ICD Multi I/O Box 130XE Adapter Board, Adds 2 extra Cart. Slots		19.00	
ICD Multi I/O Box 80 Column Plug-In Board, Monochrome & RGB Monitors		99.00	
Kid's Keyboard Controller	CX23	8.00	
Expand-A-Port P.C. Board: adds extra S10 Connectors to Daisy Chain		CALL	
Video Touch Pad	CX21	8.00	
Track Ball Controller	CX22 (ea.)	15.00	
CX22 Track Ball Field Service Manual	FD1006600	20.00	
Indy 500 Driving Controller	CA010866	10.00	
Sears Arcade II Hand Controller	CA018292	12.00	
7800 Controller Cable		3.50	

DISK SUPPLIES

3 1/2 Disk Mailers (up to 5 disks, 200 lbs test cardboard)		\$.70	
5 1/4 Disk Mailers (up to 5 disks, 200 lbs test cardboard)		20 for	
Disk Hub Rings		20 for	
3 1/2 Disk Labels		C	
3 1/2 Plastic Disk Holder (5 disks)		1.00	
5 1/4 Disk Labels (5 colors w/write protects)		.75	
5 1/4 Plastic Disk Holder/Display (12 disks)		1.00	
5 1/4 Disk Sleeves		50 for 2.50, 100 for 4.00, 500 for 15.00	
Quorum 5 1/4 Disk Notcher (all metal construction)		11.95	
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PETERSON 65XE-130XE 320K UPGRADE

A "You Build It" Hardware Project
(c)July 1987 By Scott Peterson & Released To The Public.

Documentation and kit orientated layout by Mr. Goodprobe. As we proceed with this fine endeavor in kit building, I would first like to thank those folk who first inspired this upgrade. There were several users on our board in Ohio that inquired as to the possibility of an upgrade for their Atari 65XE computer. Several folk had indeed said that such a thing was not possible, but I decided to check out this request and see if something could be done. Well, a few calls were made, the right people were contacted, (great job Scott!), and here it is! The reason I am taking the time to mention this is for this reason:

The only way we can ever know what you really want in the way of hardware is to ASK! A short time ago we read a fine article here in Zmag that told us of the inner workings of the company called ICD. They disclosed to us that the inspiration for their MIO came from you, the user, sending them ideas of what you would like to see, and the same is the case with this 65XE upgrade! If there is something else you would like to see, please send those notions to us here at ZMAG, and we will genuinely attempt to bring it to pass! Great hardware is derived from sincere questions!

I have written the following documentation in such a manner that you can use it to help you keep track of your progress as you assemble this memory enhancement. Simply place a check in the space provided as you proceed. This will allow you to readily follow your progress, and pick back up where you left off if you should have to stop.

Once you have finished this upgrade you will then have in your possession an Atari 65XE with 320K of total ram. This is broken down into chunks of 64K of standard ram, and 265K of page mapped ram. This upgrade, Scott tells us, is 100% compatible with his previous 130XE/320K upgrade and therefore will run all programs that his earlier enhancement ran.

The equipment you will need is:

- A: A medium sized Phillips head screwdriver.
- B: A very small jeweler's screwdriver with flat blade.
- C: Soldering wick (recommend Chem-Wik .100 inch size), or vacuum desoldering pump.
- D: Soldering station (like Weller model WTCP), or LOW wattage soldering pencil of the 15-25 watt variety.
- E: Small pair of needle-nosed pliers.
- F: #30 gauge wire (Jameco #130 BE)
- G: Wire stripping tool for #30 gauge wire ('Clip and Strip' Jameco #CAS-130).
- H: Heat shrink tubing or black electrical tape (tubing preferred).
- I: Small pair of wire snippers.
- J: Optional: Small carpet sample or blanket.

The parts you will need are:

- A: Z1--> 74LS158
- B: Z2--> C025953 (Custom chip by Atari)
- C: Z3-Z10--> 256K Ram chips.. #41256-150 (8 required)
- D: R1,R2--> 33 ohm 1/4 watt resistors (2 required)

PART 2 ASSEMBLY

1. Place carpet sample or small blanket on a clean, uncluttered workspace that is well lighted.
2. Situate all tools and parts on one side of your workspace.
3. Get a fresh cup of coffee!
4. Place 65XE face down on carpet. Remove all screws holding cabinet together. Turn unit over. Remove top of cabinet and lay it in a safe place.
5. Gently pull upward with fingertips on mylar extending from keyboard and remove it from its connector. Place this keyboard assembly with the top of the cabinet. Place screws in a small container so they wont be misplaced.
6. Take needle-nosed pliers and turn all twist tabs on metal shield so it may be easily removed. Remove all screws from outer edges of PC Board and then place screws in your container, and the top and bottom shields along with the bottom of the cabinet should be placed with the rest of the 65XE cabinet.
7. Place all ICs in front of you and proceed with the following:
 - a. Bend up pin number 15 on all 8 of the 41256 rams. Then snip off the thin part of the leg so all you have left of pin 15 is the 'stub' or fat portion. Do this on all 8 rams.
 - b. Bend up all pins with the exception of 8 and 16 on the 74LS158. Leave the legs on 8 and 16 long, and snip the thin part off all other pins on this chip.
 - c. Bend up all pins with the exception of 8 and 16 on the C025953. Leave the legs on 8 and 16 long, and snip the thin part off all other pins on this chip.
 - d. Take both 33 ohm resistors and snip the leads so their is 1/4 of an inch of lead left on either end of each of these resistors.
 - e. Place these chips to one side, and position the 65XE motherboard in front of you. Locate IC numbers U9 through U16. You will find them running along the left side of the motherboard. Take a piece of tape or a small black magic marker and place a small mark next to the IC that is labeled U12. You see the wisdom of doing so later on in this documentation.
8. Proceed to piggy-back ICs Z3 thru Z10 inclusive on top of ICs U8 thru U15 inclusive. Please take your time and be sure that each chip is facing the same direction as the integrated circuit below it. Do a good job soldering so not only will this upgrade work well but also will be pleasing to the eyes when you show it off to your admiring friends!

PSAN Feature Article - 8-Bit

9. Cut 7 small pieces of #30 gauge wire, and use these to connect all 8 of the pin 15s of the piggy-backed rams.
10. Gently turn the 65XE motherboard over exposing the underside to your trusty soldering iron. Cut 7 more small pieces of #30 gauge wire and then proceed to jumper all the pin 1s of the rams. Cut another piece of #30 gauge wire approximately one foot long and solder it to pin one also and then run it through a convenient hole in the motherboard. Turn the motherboard back up with parts side up once again smiling up at you.
11. Grasp the 74LS158 and proceed to piggy-back it on top of an IC on the motherboard labeled U24 which you will find at the front right of your computer. Make sure it is facing the same direction as the chip you are placing it on top of and proceed to solder pin 1 of the 74LS158 to pin one of U24. Next solder pin 16 of the 74LS158 to pin 16 of U24.
12. Grasp the C025953 IC and proceed to piggy-back this gem on top of U2. U2 can be found approximately in the dead center of your 65XE motherboard. Again, please make sure both chips are facing the same direction. Remember, a slow, sure job is often time the fastest job overall! Proceed the solder pin 1 of the C025953 to pin 1 of U2. Next, solder pin 16 of C025953 to pin 16 of U2.
13. Grasp one of those 33 ohm resistors you have previously trimmed and solder one end to pin 15 of Z3. Z3 you ask? Why that is the chip which has been piggy-backed on top of U12. U12---you know that one! Thats the chip we so wisely marked before we started! Mother would be so proud of her smart little boy! Ok, forgive me, its late and I'm getting weird!
14. Cut a short piece of wire and attach it to the free end of the resistor you just connected to Z3 pin 15. Run the other end of this wire to the C025953 pin 10.
15. Grasp the other 33 ohm resistor and solder it to the 74LS158 pin 4 (this is one of the ones you have previously piggy-backed.) Now take the long piece of wire you had previously connected to all of the pin 1s of the rams and solder this to the free of your resistor.
16. Now take the metal bottom and place the motherboard back into this protective housing.
17. At the front of your computer on the left-hand side you will find R108. Desolder the end of this resistor closest to the front end of the computer. Solder a short wire to the new free end of this resistor, put heat shrink on the connection, and connect the wire to pin 11 of the C025953.
18. Our next chore is to locate U6 which can be found near the center of the front end of the motherboard. Please be careful as the traces on this pc board are very delicate and will not be able to tolerate much abuse. Gently desolder pins 23 and 24 of U6. The best way to do this is take your solder wick, place it against the leg to be desoldered, and heat it until you see the solder beginning to flow into the wick. Turn the motherboard over and make sure all the solder is off of the pin on this side also. Repeat this step with pin 24 also. Then take a small, flat-bladed jeweler's screwdriver and use it to push the pins back and forth a bit. This will free up the pins and allow you to remove them easily and not tear the living daylights out of the board! Turn the motherboard back with the parts side up, and use that same jeweler's screwdriver to pry pins 23 and 24 of U6 out of the board. Leave them extended in a horizontal direction, snip the thin part of the leg off, thus leaving the fat parts of these 2 legs for you to connect to later.
19. Cut a small piece of wire, and strip either end. Connect one side of this wire to the land where pin 23 of U6 used to be. Fasten the other end of this wire to C025953 pin 1.
20. Cut a small piece of wire, and strip either end. Connect one side of this wire to the land where pin 24 of U6 used to be. Fasten the other end of this wire to C025953 pin 2.
21. Get your second cup of coffee, I am sure by now you need it!
22. Cut a short piece of wire, strip both ends, and connect one side to the 74LS158 pin 1, and the other side to U17 pin 30.
23. Cut a short piece of wire, strip both ends, and connect one side to the 74LS158 pin 2, and the other side to U23 pin 15.
24. Cut another short piece of wire, strip both ends, and connect one side of this wire to the 74LS158 pin 3, and the other end goes to U23 pin 16.
25. Cut another short piece of wire, strip both ends, and connect one side to the 74LS158 pin 15, and the other end to pin 8 of the same chip.(74LS158)
26. Cut yet another short piece of wire, strip both ends, and connect end of the wire to C025953 pin 6, and the other end to U6 pin 35.
27. Cut another short piece of wire, strip both ends once again, and connect one side to C025953 pin 7, and the other end to pin 8 of the same chip. (C025953)
28. Cut another short piece of wire, strip both ends once again, and connect one side to C025953 pin 9, and the other to U17 pin 26.
29. Got the feeling you know what's coming? Yup...that's right...connect one end of this wire to C025953 pin 12, and the other side to U6 pin 23.
30. Cut a short piece of wire, strip both ends, and connect one side to C025953 pin 13, and the other end goes to U6 pin 24.
31. Cut a short piece of wire, strip both ends, and connect one end to C025953 pin 14, and the other end goes to the same chip pin 16.(C025953)

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32. Cut yet another short piece of wire, strip both ends, and connect one end to C025953 pin 15, and the other end goes to U6 pin 5.
33. Take heart, we are getting close now! Cut another short piece of wire, connect one end to C025953 pin 3, and the other end goes to U23 pin 12.
34. Cut another short piece of wire, strip both ends, connect one end to C025953 pin 4, and the other end goes to U23 pin 13.
35. Cut one final piece of wire (amazing how pleasant the word "final" sounds!), strip both ends, connect one side to C025953 pin 5, and the other end goes to U23 pin 14.
36. Check all your wiring, and rearrange it to be pleasing to the eye as well as functional.
37. Get your SpartaDos 3.2 that has the RD.COM file on it, say a prayer and load 'er up! If she boots you probably are ok! If not don't panic, simply go back through section step by step, you will find it is probably some little error or oversight.
38. While you have your computer open it would be a good idea to solder the joystick jacks, the monitor, I/O and power supply ports also. It may save you a bit of aggravation later on!
39. Reassemble your upgraded computer by placing the top metal cover back over the motherboard. Turn all twist tabs and then insert the appropriate screws. Gently plug the keyboard back in, position it in its slots in the cabinets, and then place the cabinet top on. Turn over and insert all screws. While you have it out, why not use a bit of Fantastic spray cleaner on it to make it sharp! Good deal!

If you don't have SpartaDos, then you are overdue to enjoy probably the fastest and most feature laden of all the DOS family for the Atari 8-bit computer. Run, don't walk to your favorite computer software store and bring home this treasure!

For you programming types, here are the control numbers for location 54017 (PORTB).

Bank #	Control #	Hex #
Bank 1	----->131----->83	
Bank 2	----->135----->87	
Bank 3	----->139----->8B	
Bank 4	----->143----->8F	
Bank 5	----->163----->A3	
Bank 6	----->167----->A7	
Bank 7	----->171----->AB	
Bank 8	----->175----->AF	
Bank 9	----->195----->C3	
Bank 10	----->199----->C7	
Bank 11	----->203----->CB	
Bank 12	----->207----->CF	
Bank 13	----->227----->E3	
Bank 14	----->231----->E7	
Bank 15	----->235----->EB	
Bank 16	----->239----->EF	

Scott Peterson recommends using SpartaDos 3.2, but also notes you can also use MYDOS 4.1 or higher, and also Topdos 1.5 and higher with the 320k series of upgrades. If you have any projects/mods/questions you would like to ask please feel free to send them here to the ZMAG BBS, or to the Stairway To Heaven 88s at (216) 784-0574 and leave them to Mr. Goodprobe. You can obtain a complete kit of all the parts in this 65XE upgrade for \$49.95 from Midtown TV. You can reach these good folk at (216) 633-0997 from 9AM-7PM Eastern time. They also repair all Atari 8 and 16 bit computers and peripherals, and offer flat rate repairs on the 8 bit line. You also can obtain, the wire, strippers and many other goodies from Jameco. Their phone number is (415) 592-8097. By the way, did you hear that boomerangs are making a comeback? Think about it and enjoy your 130K 65XE!

-Mr. Goodprobe-

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PHONE AMPLIFIER -- REVISED *This Time A Better Solution!*

By Bill Penner, KC-ACES

I am submitting this article in response to an article which was in the August 1987 PSAN newsletter. The article was titled **PHONE AMPLIFIER MONITOR**. I strongly recommend not following the article, nor using either of the two circuits shown.

OK, so why do I **BOMB** on the article, well, there are several errors in the circuits and the text. Following my critique of the circuits, I will offer a circuit for use.

First, a quick description of pertinent phone signals. A DC voltage exists on the phone line which is used to determine if the phone wishes to 'pick up' the phone line. If a low DC current path is provided to draw some of the DC current, the line will be 'picked up' and a dial tone will be generated or the ring signal will be removed.

The ring signal is a 20 Hz (cycle per second) AC signal, not DC as indicated in the article.

Figure 1 in the article showed a doorbell transformer with the primary leads connected directly to the phone line and the secondary going through a series diode and capacitor. The output for the external amplifier is taken off of the capacitor. Well, the circuit is nothing more than a half-wave filter. But what is worse, the diode subtracts 0.7 volts from the signal. The voltage generated is much lower than 0.7, and nothing (or very very little) current will make it through the diode. If the audio was of sufficient level to get past the diode, the rectified audio is converted by the capacitor to a very slightly varying level DC, and if a 100 uF cap was used, as indicated, the voltage would change very, very slightly. This would result in very distorted and low level audio.

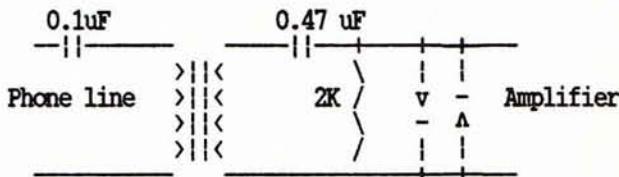
Another problem with the circuit is the direct connection of the transformer to the phone line. As I indicated before, to pick up the phone line, a DC current path must be provided. A transformer input is an excellent DC current path. With this circuit on the line, you would not be able to hang up the phone without disconnecting the circuit. Besides now requiring a switch, **MA BELL** would not be happy because of the line loading caused by the transformer input.

Figure 2 showed a transformer with a series **POLARIZED** capacitor on the input to the transformer and the secondary of the transformer connected to the amplifier. This circuit was the design of the author to improve on the other circuit (no doubt!). This design has its merits, but, **YOU DON'T REPLACE A DIODE AND A CAPACITOR WITH A POLARIZED CAPACITOR!!!!** Not only is it technically wrong, it can be dangerous to one's health! A polarized capacitor is one which was designed to handle a voltage in a certain direction (hence the polarization). Most polarized capacitors conduct when the voltage is reversed. Now, if you tried this trick with an electrolytic capacitor, the hazard is the greatest. The electrolytic capacitor contains a semi-liquid electrolyte. When the diode conducts a reverse current, the diode will begin to heat up. If the pressure builds up high enough, the

capacitor will physically blow the metal case off. Did you ever wonder why rubber plugs are used on the ends of the caps instead of an epoxy sealer? When the author mentioned that the capacitor could be reversed and would be just as noisy, he wasn't kiddin'! I have bounced capacitor shells off of the ceiling in my old high school electronics lab. The other popular polarized capacitor is a tantalum cap. This one is very much like a diode in the reverse direction. This one generally doesn't blow up, but does provide a nice blue cloud when reversed.

I don't mean to **BOMB** on the author of the article. The input is greatly appreciated. But, please, if you are going to tell the world a circuit, please have it checked by a competent engineer or technician. The other thing is that when dealing with **MA BELL** lines, if you accidentally (or willfully) cause something to be sent down the phone lines which causes damage to **MA BELL** equipment, you will be paying for all repairs!

I don't recommend playing with the phone lines unless you know what you are doing. But, if you really want to play the phone line on an external amplifier, I suggest the following circuit.



Both capacitors should be non-polarized and the 0.1 uF cap would be rated at 200 volt or above.

The transformer is a 1000 ohm center tap to 8 ohm, available at Radio Shack. If you want to use the bell transformer, go ahead at your own risk. If you use the 1000:8 transformer, use the center tap and one side of the input (500 ohm input).

Circuit Description.

The series capacitor on the input prevents the phone line from being picked up by disrupting the DC current path.

The output of the transformer is sent to an RC filter (the capacitor and resistor).

The RC filter has a pole at about 150 Hz and will attenuate signals below this frequency (like the 20 Hz ring tone).

The two diodes provide some protection for the amplifier. Glitches can occur on the phone line, just like power line transients. The diodes will prevent the voltage from increasing above 0.7 volts peak to peak.

Club News

PARTICIPATING PUGET SOUND AREA USERS GROUPS

ATOM

ATARI ON-LINE MODEMERS

PRESIDENT	Skip Sharow	697-2706
EDITOR/TREAS.	Roy Smith	377-2523
BBS SYSOP	Andy Eklund	

Meets: Monthly in Poulsbo. Call any officer for details.
Mail: 5553 Oceanview Blvd. N.E., Bremerton, WA 98310.
BBS: STORMBRINGER BBS, (206) 697-3496, 24 hr., 300, 1200, 2400 baud. Currently operating on an 8-Bit system with a 20 MEG HD and running BBS Express software.

B.R.A.C.E.

BELLEVUE REDMOND ATARI COMPUTER ENTHUSIASTS

PRESIDENT	Jim Yee	643-9697
VICE PRESIDENT	Richard Coate	547-0460
EDITOR	Wally Wong	641-1866
TREASURER	Joe Asaif	746-0737
SECRETARY	Gary Skelton	454-7488
8-Bit LIBRARIAN	Joe Mraz	747-2433
16-Bit LIBRARIAN	Rich Coate	547-0460
BBS SYSOP	Everett Tsang	

Meets: 2nd and 4th Mondays of the month at 7:00 PM at the Lake Hills Library, 15228 Lake Hills Blvd, Bellevue, WA.
Mail: P.O. Box 70097, Bellevue, WA 98007.
BBS: BRACE BBS - Coming soon!
Dues: \$15 per year.

BRACE AUCTION - OCTOBER 26th

By Wally Wong, Editor

The infamous yearly BRACE AUCTION will be held on the second meeting in October. This is the time to clean out the computer closet, remove some clutter from the desk and make a few bucks at the same time. You'll also be helping the the club by either donating all proceeds to BRACE or receiving 25% of the selling bid.

In the mood to pick up some hardware and software at incredible prices?? This is the place to be! Last year, Xanth donated a pile of software and several light pens for the auction. Most items were sold for about 10 to 20% of actual cost! Books were going for 50 cents to a couple of bucks. Jeff Popp sold an XL/XE memory upgrade which he provided all parts and labor; all proceeds went to BRACE. Members brought in lots of software and hardware to unload.

The rules of the auction:

1. Open to paid BRACE members only (you can join prior to the auction if you're not a member yet.).
2. Please mark the items you intend to sell at the auction with your name.

3. Let the auctioneer know if ALL proceeds go to BRACE (otherwise, 25% of the sale will be returned to you.). and...
4. Arrive on time and plan to stay a bit late if the auction gets hot and heavy (forget about Monday Night Football, the strike will probably be on!)! Anything related to computers is welcome.
5. Needless to say, but I'll say it anyways - all items must be of legal origin and, if possible, please include original packaging and docs.

I got a box of stuff to get rid of, but I'll probably bring home two boxes at the end of the auction!

BRACE MEETING MINUTES

August 10th, 1987
Submitted by Gary Skelton, Secretary

President Jim Yee called the meeting to order and asked if we had any new visitors present of which there were two.

Jim then called for the various reports and Vice President Rich Coate gave the following:

DTack software sent the club nine copies of the manual for their D-Basic for the ST machines along with the program and enough labels for forty copies of the program. This is shareware and will sell the manuals and give away the program copies and any other manuals will have to be ordered from DTack. There was much interest from the members for the program and manuals.

We now have a Popcom Hayes compatable modem for running our BRACE BBS, but lack a compatable serial device for hooking into the system as of yet.

Gary skelton reported that Joye Bonvouloir and her husband donated to the club an Atari 400, a cassette drive and a fair amount of software that we will using in the future for some of our club projects.

Jim Yee gave a report on his recent trip to SIGGRAPH, the annual gathering for computer generated films and graphics. This is in conjunction with Hybrid Arts, a company along with whom Jim works. As this is not computer brand specific, many other types, other than Atari, were represented with Atari present throughout the show. We have asked Jim to write an expanded piece on the show for PSAN.

For demos Dan Berg of Xanth showed the new Atari XE game machine and for the 16 bit he introduced the group to Antic's GENESIS, a molecular structure program that can be used with the 3-D glasses.

Also for the 16 bit Jim Yee showed BARBARIAN, an adventure game from Psygnosis, with some of the best graphics yet to be seen for this type of application.

For the 8 bit Joe Mraz had a copy of SCRIPTOR 80, an eighty column word processor, that looked fair on the composite monitor.

Club News

FROM THE PRESIDENT

By Thom Lawless

KC-ACE'S

KITSAP COUNTY ATARI COMPUTER ENTHUSIASTS

PRESIDENT	Bill Penner	(206) 373-4840
SECT'Y/TREASURER	Mack Burns	437-2751
EDITOR	Darren Tonnessen	842-3992
8-Bit LIBRARIAN	Wayne Boivin	674-2140

Meets: The 2nd Wednesday of the month at 7:00 PM at the Central Kitsap Junior High School in Silverdale.

Mail: P.O. Box 2333, Bremerton, WA 98310.

Dues: \$15 per year. Size: 75+ members.

* KC-ACE'S MEETING LOCATION *
* The October and subsequent monthly meetings will *
* be held at the Central Kitsap JrHi in Silverdale. *

KC-ACE'S SEPT. MEETING MINUTES

By Darren Tonnessen

Our regular meeting place at the Central Kitsap Jr. High had a conflict, so we met at Pietro's Pizza in Silverdale. We had about 12 people in attendance, which seems to be a high number compared to our norm. Bill Penner, our President, opened the meeting about 7:15 PM, and followed by showing his EPROM burner. Things were discussed, and then the topic of elections came up. Since September is our official month for elections, Bill said that he would continue his current temporary job as President, and Mack Burns our Sec./Treas. said he would also continue. Nobody seemed to mind, so it was agreed upon.

September is also the month that ALL dues are to be paid. There are still a lot of people that need to renew, or they will not get a newsletter etc. Support the club! If you have any questions, contact Mack Burns at 437-2751. We also need articles! Now that fall is in the air, maybe you will have more time at the CPU... That's always a popular excuse. Our next meeting will be at 7:00 PM, the 14th of October, at the Central Kitsap Jr. High School. Please try to make it... We should be doing some Demo's of Utilities, Games, etc... If you have something to show or say, drop by. Put it on your calendar today.

R-ATARI

USERS GROUP

PRESIDENT	Thom Lawless	(206) 321-5127
VICE PRESIDENT	Greg Barnes	678-6305
SECT./TREASURER	Rich Lyon	675-6882
LIBRARIANS:	Eric Koetje	675-4326
8-Bit	Randy Nollan	679-2216
ST	Alex Ancheta	675-7628
EDITOR	Thom Lawless	321-5127
ASST. EDITOR	Charles Onley	675-0425
SYSOP	Thom Lawless	321-5127

Meets: The third Saturday of each month at 7:00 PM (6:00 PM setup time) at The Harbor Tower, 7330 700th Ave., Oak Harbor, WA.

Mail: P.O. Box 845, Oak Harbor, WA 98277

BBS: THE FREELANDER BBS, (206) 321-5127, 9:00 PM - 8:00 AM, 7 days a week.

DUES: \$12.00 per year.

Well here we are again, school has started, it's getting cool outside. Time to fire up the 'ole system and see what can be cranked out this month.

As you may or may not have noticed we have a new meeting place, I have to really give Jim Harvey a big THANK YOU! for finding and making all the arrangements for us. It is very convenient and comfortable place to meet. Those of you unsure of the location can contact any of the officers, we all know where it is now.

At our September meeting Sam Sieben of Precision Electronics and 'Big' Al Cummings of STARBASE will visit us. I'm not really sure what they will be demonstrating for us, but knowing these two, it will be good! The visit is intended to be a 'goodwill' mission. Many of the clubs in PSAN are spread apart, we are in the process of trying to get the officers' of various clubs to visit each other at their meetings. We feel it will bring us closer together, not much can be done about the distances' but cooperation knows no bounds. The more we work together the more all of us will benefit. This basically came about from my visit to STARBASE's hardware clinic in August. We discussed the idea at length and thought it had merit. Now we are trying to get it off the ground and working for us. I will try to keep you posted on, who is going to, or coming from, where.

If you read the Sect./Treasurer's report you will see that our 1988 Programmer's Contest is in full swing. We are still hammering out the rules and prizes for next year. They need a little fine tuning over last year's rules. So those of you who didn't enter last year, get cracking, you have plenty of time to get one ready this year!!

That about covers it for me this month. Well, just one more thing, does anyone have a good joke I could use for the November meeting? I've used up all my turkey jokes for this year!

Thom

SECRETARY/TREASURER'S REPORT

By Rich Lyon

The August meeting was called to order and the minutes of the July meeting were read. The treasurer's report was given showing our treasury at \$292.42. Thom then asked if the new location met with everyone's approval. It was unanimously approved to hold all meetings at the Harbor Tower as of this meeting. I stated that the membership cards were ready and that a lot of help had been given by Mike Burnett in the design and printing.

The new constitution was voted on after making some minor language changes and the new copies will be available at the September meeting. Also I pointed out that Club information sheets with membership applications are now available at Isletech.

Rich, from Isletech, attended to explain his policies and the type of equipment he will have for sale in his store.

Greg mentioned a new store in the North Seattle area called Cave Creek Computers. Some of us ST owners will have to give them a check.

At the end of the meeting the software contest entries were demo'd for the group. As most of the entries were sent in by Penny it was not hard to see that she took most of the honors. Now all we need to do is finalize the prizes.

We found out some new things in our first annual contest, things that will need to be addressed for the contest next year. The rules for the 1988 contest will be published here

Club News

in the next issue. The 1988 Programmers' contest has already begun, submissions are due no later than July 31, 1988, start readying your programs now!

With new members from areas like Florida, California, and Georgia, we're getting to be a fairly good sized group and on such a small island too (longest in the US).

See you next month!
Rich

LIBRARIANS' REPORT

By Kandy Nollan and Alex Ancheta

The boot screen is still in the makings. The picture is drawn, all that remains is that the screen be 'scrunched' and inserted into a boot loader program. It has been predicted to be complete by the end of September, that is of course, if one of our machine language wizards ever gets it done.

Disk 64 and 65 are in the works as of this writing. They will include the stuff from the contest (some Demo's & a Directory program). These should be available at the September meeting. Those of you, who were wanting a copy of these great programs, will be able to get them then.

At the August meeting Mike Burnett cleaned off his computer shelves and donated numerous books and magazines on Atari 8 bit's to the Club, Thanks Mike.

Also at this meeting there was \$38.50 worth of software sold from the Club library. This put the library back in the green. It is the first time the library has been in the 'green' since it's inception back in 1981!

See you at the next meeting!!!
Alex and Randy

S*P*A*C*E

SEATTLE PUGET SOUND ATARI COMPUTER ENTHUSIASTS

PRESIDENT	Jess Lantz	473-2420	Tacoma
VICE-PRESIDENT	Cindy Bowman	248-2238	Seattle
SUB-GROUP PRESIDENT			
ST PRESIDENT	Dave Showalter	824-5141	Kent
HARDWARE SIG LDR.	Greg Pringle	-----	Tacoma
CORRESPONDING SECT'Y			
RECORDING SECT'Y	Cindy Bowman	248-2238	Seattle
TREASURER	Tom Neitzel	473-0187	Tacoma
LIBRARIAN	Jim Chapman	582-4269	Tacoma
ST LIBRARIAN	George Terpening	941-7155	Auburn
MEDIA LIBRARIAN	Blake Herring	564-3265	Tacoma
PROGRAM CHAIRMAN			
EDITOR	Chris Carson	565-8189	Tacoma
BBS SYSOP	Robert Smith	941-5537	Fed. Way

Main Meeting: 1st Saturday of the month at 6:00 PM at the A.P.P.L.E. Co-Op, 290 SW 43rd St., So. Renton, ph 251-6787.

Tacoma Sub-Group: 2nd Saturday of the month at 10:00 AM at the South End Neighborhood Center, 7802 So. L St., Tacoma, ph 591-5098.

ST SIG: 2nd and 4th Wednesday of the month at 6:00 PM at Butler's Computer Service, 28717 Pacific Highway So., Federal Way, WA, ph 941-9096.

Hardware SIG: 4th Saturday of the month at 10:00 AM at the South End Neighborhood Center, 7802 So. L St., Tacoma, ph 591-5098.

BBS: S*P*A*C*E, (206) 941-2824, 24hr., 300, 1200, 2400 baud.

Mail: P.O. Box 110576, Tacoma, WA 98411-0576.

Dues: \$15 per year. Size: 250+ members.

* S*P*A*C*E MEETING NOTICES *
* The OCTOBER 3rd MAIN MEETING will be an "all-you- *
* can-eat" PIZZA FEED at Godfather's Pizza in the *
* Fred Meyer Shopping Center on Highway 99, north of *
* Butler's Computers. The pizza is FREE for members *
* & we'll have computer GAMES, too! Don't miss it!! *
* ----- *
* The NOVEMBER 7th Main Meeting is SWAP-MEET night! *
* Bring unwanted hard/software and/or spending cash! *
* ----- *
* The ST SIG Meeting nights have been changed to the *
* 2nd and 4th WEDNESDAYS of the month - Butler's 6PM *

My Adventures in Space

-By Craig Freeman-

Let me introduce myself. I am Craig Freeman and I am a Computer Addict (I was told that you have to say that to yourself before you can get cured).

I am the proud owner of an Atari 1040ST/color with a Star NB2415 printer and an Avatex 1200HC modem (sounds like the typical addict huh?).

I first learned that I was an addict (Hobbiest) when a good friend of mine years ago bought a paperweight. He was telling me all of the time that it collected dust that it was a computer. I knew better. Computers are able to be used by the faint of heart and don't require a graduate degree in math (read user friendly). His was not of such a brand.

You see already I had adopted the language of a real computer hack. This was only a sign of things to come.

For the next few years I dabbled with other friend's 'computers', I never rushed out to get my own because it had not been marketed yet.

The real excuse was I knew myself better. I was already a closet addict (hobbiest) and as long as I had to use someone else's machine I couldn't get hooked. Wrong!

About a year ago I went to my first Atari club meeting. They kept calling it a S*P*A*C*E meeting. I didn't know yet, but without joining the club I would miss out on all sorts of great things. Free pizza feeds, a newsletter that rivals a good rag for information and entertainment, not to mention all of the good articles on "HOW TO". Ways to repair or change the way your computer works (hopefully for the better).

Finally, Atari had built the machine for me and the hook was set. I was being reeled into the boat. Yup, hook line and disk drive. It was all over. I had to have it all (typical addict). My days were spent trying to find special programs to run a non-compatible printer. Easy if you know where to look. All that took was a phone, modem and money. This was getting out of hand fast!! I knew that if I didn't get help I was a gonner. Late at night the computer would call me from my bed with a new direction for me to go. I tried to ignore it, but for the best part it had me bad. Soon I was being forced to fight battles on the outer edges of the universe and solve unsolveable mazes as I worked through stacks of public domain software document files. ARRRGHHHH!

It took another few meets before I finally saw the access code string at the end of the tunnel. I joined S*P*A*C*E at the September Main Meeting. Boy what a deal too!

The September Main Meeting marked the first Lottery for the club. If you missed the last issue of PSAN, the good ol' boys got together and voted to hold a lottery once a month at the Main Meeting as a way to boost membership attendance. The pot would be salted with fifty smackers (\$50.00) and another second prize of a thirty dollar (\$30.00) gift certificate.

Club News

It wasn't until after I had joined that this lottery was brought to my attention. It was not until my name had been called for the first prize of FIFTY BUCKS that I thought I would ever win! I never win anything.

I won because I was at the meeting. If I had stayed home to watch the re-run of Knots Landing or gone fishing I would have been left out of the fish bowl and the lotto would have gone to some other lucky member in attendance.

Well I may not be cured, but I feel a lot better now and if you didn't catch my last paragraph's meaning... Get to the Main Meetings. They are filled with mega bits of information and getting a chance to flet your mind with other members is lots of fun. One addict (hobbiest) to another. There is no better place to go and relate than in S*P*A*C*E; see you at the Main!

CBF

S*P*A*C*E MEETING NOTES

By Cindy Bowman

September 12th Main Meeting

Education was the theme for this month. Cathy Bergh started as the first guest speaker and she gave a presentation on educating children with computers and what to expect. She pointed out the different levels of progression and at what ages you may expect children to be able to complete the different levels.

She started by explaining the age group of approximately 1-1/2 to 2 years old, which is the youngest a child might be able to use a simple computer. At this age you can only expect that the child will just push buttons, but this in itself can train reflexes. At this stage the computer is just an electronic busy-box and lets them manipulate reactions from the computer. At 2-7 years they should begin to use the joystick or keyboard for drills or games, with the use of peripherals during the latter part of this age group. Children approximately 7-11 years old develop more concrete operations such as classification (i.e. addition, subtraction, and multiplication). Before this stage they still need parental guidance as the computer won't know what they are thinking. They can also begin simple programming at this level. During the 11-14 year period they develop formal operations of creating and forming solutions. Such programs as word processing, spreadsheets, and higher levels of programming, including branching and arrays. This age group can use all the capabilities of the machine.

Cathy gave examples of other types of educational software, such as learning Spanish. The disadvantage, she pointed out, is that a computer can teach how to read a language, but it doesn't know if you are pronouncing it correctly. She offered some suggestions for buying educational software for your child:

1. Children do not truly learn well under pressure; thus any program that makes the child hurry to get the right answer is a deficit.

2. If the software you are thinking of buying doesn't have ability levels, don't buy it.

3. Take the child with you to the store and try it out before buying it. Focus on those skills where the child needs improvement.

4. Most ages should use the computer with parental guidance, especially in the earlier stages. Sit and play together.

5. Don't rule out games altogether. Some games can teach mental concepts (i.e. solitaire, checkers).

Basically, a child learns certain tools, thinking, and strategies from the computer.

After a 10 minute break the next presentation was a short introduction to interfacing the 8-bit computers for multiple printers. Scott McGowan gave a demonstration of his system he has set up for movie rentals, where he has up to 4 printers hooked up to the computer to perform certain tasks. One prints receipts, one prints barcodes on labels, etc. Quite an interesting application.

Next Tom Neitzel gave the Treasurer's report and mentioned several "tidbits" of club information. October's main meeting will be a social gathering for a pizza feed at the same Godfather's Pizza at Fred Meyer's Midway Shopping Center. He mentioned that we are trying to set up some computers for games, but we can't guarantee it at this point. Next month's newsletter should still have the same type of cover pages, but have slicker glossy pages inside. The sale of club ST disks will be reduced to \$4.00 at club meetings only. If we don't have the particular disk you want available at the meeting, we will guarantee the price and mail it to you. Suggestions were fielded to think about another Atari show next year in Seattle, and also helping out school districts that have Atari computers was mentioned.

Other items of discussion were the new version of DTAC Basic, articles in other newsletters about the Magic Sac clone from Best Electronics, and the assurance that the club has not definitely decided to buy a laser printer yet, due to problems others have been having and the costs involved. This will be an item of discussion in future board meetings when more data has been acquired.

Tom announced our new program for prizes at the Main Meetings...we will have a prize drawing each general meeting for a \$30 gift certificate at the computer store of your choice. If that person is not in attendance, we will draw a name until we get someone who is present. Another drawing.....

The club has also started another drawing (lottery) which begins with a \$50 cash prize. Names of all current dues-paying members are placed in a jar and a name is drawn from it. If the name of the member is called and he/she is not present at the meeting, then the money is kept and another \$10 is added to the pot for the following Main Meeting. At the next meeting, if the person who's name is drawn is not present, again we will put another \$10 in the pot, and so on, until someone who is in attendance wins the prize. In other words, in both cases, you must be present to win.

George Terpening took over for the ST side and gave us a demonstration on two items. The first was an editor he has been using for the club library, and his Bowling Secretary program he has written with DBMan. He is finalizing his product for the commercial market at this point and should be out soon. He mentioned that it is not GEM interfaced to allow porting over to other computers. The ST version he is going to release will come on two single-sided disks.

That was it for this meeting. Tune in next month for a summary of our Pizza Feed Night on October 3rd!

August 11th ST SIG Meeting

Several new faces were in attendance and Dave Showalter asked them to introduce themselves. He gave a brief history of past club happenings/procedures and answered questions from the new Atari users.

Dave covered the offer from Current Notes newsletter again. He said he would only mention the discount of \$17 per year a couple more times. We had 3 signed up at this point and needed at least seven more to establish the discount for the club.

Club News

The next item of interest was the public domain program which converts text files into 'jive' talk. Dave typed in 'Now is the time for all good men...' and it replied 'Now be the time fo' all bad dudes...

He then demonstrated various GFA Basic programs in the public domain, including a communications program that was written by a 'local yokal' by the name of Robert Smith. Several comments on the pros and cons of different languages were fielded for lengthy discussion.

A question was asked about the resolution differences between color and monochrome systems when using Fleet Street Publisher and Publishing Partner. Carolyn Caine explained that she uses monochrome most of the time, but the printouts will be the same for both systems. The only differences you will see is with screen resolution.

Carolyn then gave a brief demonstration of a Freeware compression program called DCopy, written by Ralph Walden in Eugene, OR. All of the commands and information are in the menu and directory. It also is a smaller file than the ARC.TTP program. More discussion on the anticipated sales of the new Mega ST's and shared comments on shaking the 'game machine' image for Atari.

Our next demonstration was given by Ron from I.B. Computers in Portland, Oregon. He showed how the Atari ST can run IBM programs, both public domain and copyrighted, by using PC DITTO! and an IBM-type DOS, transferred from 5-1/4" IBM disks to 3-1/2" disks. Ron explained that PC DITTO! will allow you to run IBM programs that are entirely IBM compatible. Some of the clones are not entirely compatible and software developers have had to 'tweak' the program for those machines. The programs written for the clones will not work, so actually, PC DITTO! is more IBM compatible than the IBM clones. He also mentioned that you can't get any Basic language to run either. The major difference you will see that might be irritating to those who truly don't need this capability, is the fact that the programs will basically run slower than if you were running it off an actual IBM-type computer. For those who have a lot of IBM programs and would like to run them on their ST, this is the program that can do it. Dave pointed out that one of the reasons why Atari stayed with 360K for SS and 720K for DS disks, was to keep compatible with the IBM disk setup. Unlike the Amiga which is 800K on a DS; when adding more storage capacity in this way you loose your IBM compatibility.

Word processors were the next topic of discussion. Some preferred to use a word processor that has a 'what you see is what you get' setup, whereas others liked the public domain ST Writer better, not only because it was free, but it has more capabilities, and its commands are familiar to the 8-bit Atariwriter users. Some expressed anticipation for a GEM version of ST Writer in the future.

George Terpening announced that the new DBasic he had just received in the mail, was to be the disk giveaway at the September main meeting.

Ron mentioned that the public domain program of the game Monopoly no longer exists. Apparently the person who wrote it from GFA Basic was called by Parker Brothers' lawyer and asked him not to distribute it anymore, as it was too similar to the actual board game.

George gave the ST library report, a couple more questions, and the meeting adjourned.

August 25th ST SIG Meeting

I arrived late to this one, so we'll begin upon my arrival....

There was standing room only at this meeting, and a Mega ST was there, too! Dave explained that the new machines had

only been delivered to the distributors and developers so far, with more to arrive in the stores in the next few weeks. He had the machine running and pointed out the major differences from the previous line of ST's. Obviously by now, many of us know that there will be no Mega ST's manufactured with only 1 meg of memory. They will either be 2 meg or 4 meg machines, and are geared more towards the business market than the previous line.

Carolyn Caine demonstrated the results from her IMG scanner she finally received. With any program there are good and bad points, and you can find her article on the IMG scanner in the September 1987 newsletter.

Our guest speaker was Paul Mazurek from Migraph, Inc. He demonstrated one of their newer products for image scanning, and answered questions about Migraph products in general.

Next we had a drawing for four DBasic programs with manuals, and dispelled the rumor that Publishing Partner doesn't run on the new Mega ST's. Dave demonstrated that it did in fact run as well as most other ST programs he has tried so far.

More questions on PC DITTO!, modems, mail order products, trade journals, etc. were discussed. I asked for someone else to volunteer to take meeting minutes for the ST meetings only, as I cannot devote as much time for both the ST meetings and the main meeting. No volunteers at this time.

A brief mention of club news. Then the meeting was adjourned.

STARBASE

ATARI COMPUTER USERS GROUP

PRESIDENT	Rob Hendershot	745-3440
VICE PRES 8-BIT	Omar Crawford	653-7671
VICE PRES 16-BIT	Doug Olsen	743-4135
SECRETARY	Wilma Crawford	653-7671
TREASURER	Steve Drake	782-3691
EDITOR	Al Cummings	784-8658

* Give us a call if you need help. *
* We want to know how to help the group! *

Meets: 2nd Friday of the month, 6:00 PM at the Mountlake Terrace Library, 236th SW & 52nd Avenue West, Mountlake Terrace, WA.

Mail: c/o Steve Drake, 8307 27th NW, Seattle, WA 98117

Dues: \$15 per year. Size: 85+ members.

PLANS AND IDEAS

Editorial by Big Al

The meeting went real well last month and the pizza sign was fun but smaller than normal. The after meeting is where people loosen up and come up with the plans that are passed around later. Join in if you can.

The mod clinic is coming up still and the memory of the last one is not past us yet. Sam has tried hard to fix the problems and is trying to keep smiling. I do not think there will be any more clinics since the interest has dropped. The need now is for drive repairs. Hopefully Brad Koda will be up soon or we can do something within the club as many people need some work done.

Looking around the stores there is several new programs that I will be buying and reviewing next month including

Club News

Bard's Tale from Electronic Arts, Rings of Zelfin and The Eternal Dagger from SSI and Interlink ST (a modem program, I forget the company). As stated elsewhere I also got Alternate Reality, The Dungeon (do you see a pattern here) and will give a good report next month. The new 1200 baud Atari modem is in stock in the local stores and it looks as good as it has been advertised. It will work with an ST or an 8-bit and only needs a cable or a SIO cable to run. Not sure yet what software will work with it but we will try to show it at the next meeting.

We had a lot of fun at the grand opening of Cave Creek Computers and ate the food and even had some cheap beer. A lot of people came by and we sold a lot of PSAN's for people seeking the ATARI groups. I hope some show up at the meeting and some of them buy a system soon and start having the time of their live just like we do.

Should we go to the pizza meeting? I like the library, but I don't want to have to leave at 9PM either. Winter is just around the corner and standing outside talking later is not at all fun. It is up to the members and like always vote how you feel and not what other members say, but an open mind gathers no moss.

Since this is the October issue we should talk about the rest of the year also as there is a computer fair coming up if we want to go again (I do) and we can set up some kind of party for the December meeting. If you have any input please speak up and help the club be all it can be.

It has been a month or two since the last time I had to beg for some input for the newsletter and hope to find some others that have something to say and will send it to me in time to put it in the newsletter. We have a great newsletter and need your help to improve the contents.

I will close with a big maybe if possible. Stalleg will return this month with more room and faster speeds even easy for members to call and get help fast. That is all I will say as the size 10 sneaker takes a month to finish.

TREASURERS RAMBLINGS

Hey, what can I say? The flu bug got me. That day was not a good one for me. O.K., I left work at noon, because of my gut ache. On the way home, there was a decision to make. To stop at the bank or not. I stopped. A few blocks from there, the sound of a police car looms behind me. He wants me? My ticket is for \$133.00. Expired license tabs! How could it happen, you ask? Easy! The notice you get, telling you it is time to renew, is only a 'courtesy' notice! An expensive lesson to learn!

Today was Cave Creek's "Grand Opening". A few of us showed up and stood around, hoping to help Becky and Steve. A good turnout, if you just want to count attendance. Poor, as far as system sales went. If we want this location to last, we're going to have to support them. This may mean BUYING something there! (Yes, I did buy something.) Remember, these are the same people that donated over \$300.00 worth of software for OUR auction!

It seems, that maybe the time has come, to switch our meeting place. Our membership is growing and we're slowly, but surely, running out of space at the library. It makes me happy, to see all of you sitting and standing out there. If you only knew how much I push this group, then you'd feel the same good feeling! Anyway, Alfys has been suggested as our "new permanent" meeting place. What do you think? Be prepared to vote on this, at the October meeting. I like the idea. Omar will bring his PA system, so all of us sitting in the back can hear. We'll fix the TV, so the computer works properly. We can eat dinner and have a few beers, which we always seem to do afterwards. I just can't find ANY negatives! Please form an opinion and bring it to the next meeting!

Speaking of which, Omar will be getting some NEW 8 bit software and demoing it for you soon. When he is done, for \$2.00 a pop, you that want to, will get a chance to WIN this item! There is NEW 8 bit stuff out there and what better way to find out what it is!!

Our bank balance is at \$665.00. Those of you that need to renew your membership, please do so. This can be done by either sending me a check or by coming to the next meeting. At the October meeting, we'll be selling blank 5.25" disks. This is in addition to our regular disk sales. Please take a look at the club disks. There are lots of good things to be found! And at a cheap price!!

If anyone is into Desk Top Publishing, please let me know. I ran into a person, that would love to know how it works on the Atari.

In case you didn't get up in time to hear my radio broadcast, Sunday the 13th, (and your not alone), it was a fun time. We actually had a few people call in. Radio has always fascinated me. To be a part of it, is a dream come true.

It's also time Starbase had a contest. Member participation would be nice. What kind of contest would you like to see? Graphics? Novel writing? New logo? Lets have some fun! What can we do and what kind of prize would you like to see? Call me.

Keep On Trucking,
Steve

STARBASE MEETING MINUTES

September Notes By O. Crawford

Friday, September 11, 1987. Steve Drake was deathly ill - well sick enough that he couldn't make it to the meeting. Rob Hendershot was also not in attendance and Wilma decided it was time to go into the hospital 3 months early. So here we were just Doug Olson, Al Cummings and myself to stand the test of directing the meeting.... we pressed Terry Tallman into being our spokesperson for the evening so I could take the minutes and run the 8-bit library and Doug could run the 16-bit library.

Another meeting packed to the rafters with standing room only. Six (6) new people were with us tonight and they were cajoled into identifying themselves and their interests to the rest of us. Seems every meeting is getting larger and better. Let's continue this trend, if you know someone with an Atari or is just thinking of getting a computer; bribe, drag, or hog-tie them and bring them along to the next meeting.

Demos were aplenty on the 16-bit this time with Dr. Bruce Noonan giving his time and expertise on the ST.

Dr. Noonan has had the opportunity to run IBM software with the new PC DITTO!. Also in his stable is the new 4meg MEGA ST which he brought to the meeting and ran all the demos on.

Dr. Noonan demo'd his updated ST-Writer 2.0 which is almost identical to 1.75. Those of us who have had the opportunity to use this program will agree with me that it is excellent.

The next demo was a new 3-D Xanth demo with space station - very impressive. Next we were shown the Alladin magazine on a disk with very impressive graphics and assorted information, movie reviews, art critics etc.etc. Most of the articles on the disk have nothing to do with computers, but it is a well rounded mag on the order of OMNI or something similar. The next demo came from Canada and is designed as an educational program for 6th thru 11th graders on AIDS. Although the program seemed to be well thought out, the voice simulation reminded us of the the old 8-bit S.A.M. and was hard to understand. The program's called Dr. B. CAREFUL'S BODY SHOP.

Club News

Al Cummings then demo'd the newest war gamer's game EMPIRE. The computer starts out at one end of the map you start out at the other and when you meet you battle it out. Lots of maps and movement phases, if you're a war gamer, this is another one for you!

For those in the know, it's said that the MAC-SAC is slow in color, but actually runs 20% faster than the MAC in MONOCHROME. Also there is a stackable cartridge that goes in between the MAC-SAC and the ST and allows you to use real MAC disks so you don't have to port them over.

Other rumors-- new art programs that allow 256 colors on the screen at once and one that allows 1000's of colors at once.

By the time you read this CAVE CREEK will have had its grand opening about three weeks ago. They are located in Ballard at 85th and Greenwood. Stop in and see them. They support our group and we in turn should do all we can to support them.

More people are interested in upgrading their 8-bits and October is being scheduled for those who still need their machines to be upgraded.

Doug Olson has started a 16-bit rental with his donation of TASS-TOWN to the 16-bit library and it looks like there might be more added at a later date.

Well, it seems like time just flies when you are having fun and its time to end another meeting, too much to see and talk about and not enough time to do it in.... we'll see you next monthOmar & Wilma

STARBASE ST LIBRARY REPORT

By Thud Rooter

Lots of new stuff in the Library this month. If you were at the last meeting you saw four new game disks, several new magazine disks and the latest version of ST Writer, 2.0.

ST Writer is the biggest news. One click of the mouse key and you are in a pull down window format as soon as you hit escape. I haven't read the docs yet but this is being typed with Bruce's latest version of the old 8-bit standby.

He has added some neat features and they streamline the chassis of what started out as the ST version of the easiest word processor I've used to date (I really don't need an ST version of PAPERCLIP thank you!)

It's in the library now.

We will have a couple of more game disks, some utility disks that are new and we have a disk with DCOPY. The easiest deARCing program I have found.

Additionally the latest update of the library will be downloadable from COLOSSUS BBS, GAS-ST, and STALLAG and the BRACE BBS if the latter two ever go up again.

Perhaps the strangest addition to the library is the SUPER CHARACTERS disk for PHANTASIE. This is a character disk for the three games by SSI. These characters are the answer to anyones dreams who has fought the good fight over and over and still failed to get to the end of the game. See the review elsewhere.

The library will also be available as an ST writer file on disk but will only be available if some expresses an interest. I am trying to go back and include more descriptions of some of the magazine stuff and odds and ends in the other files.

If you want to order a set of disks, or quantity give me

a call at least the week before. Or if we run short of something let me know, and I will run extras for the next meeting. Disk requests can be left on my answering machine at 259-5949, 24 hours a day.

LIBRARIANS REPORT

By Omar Crawford

This month we only added one disk to our library, the ANTIC magazine disk for September. Next month we will have the October issue and hopefully the July/August and September issues of Analog. Tentatively scheduled for the November meeting we are going to raffle off the older programs from our rental library so as to aquire some newer ones to stimulate the rentals.

Also during the upcoming meetings we are also going to start having door prizes in the form of free disks of software from our libraries (both 8 and 16 bit) for club members.

Another thing I would like to bring up is the possibility of having our meetings at the Alfies Pizza meeting room, I think we should seriously consider moving to this location permanently for the following reasons:

a) In less than one year the library where we are currently meeting will be gone.

b) Our last 3 meetings have been packed house with only standing room.

c) The time limits (at the library) are starting to cut our meetings short with the number of demos and member participation in our discussions.

d) At Alfies we can continue our meetings past 8:45 with no time limit on when to leave.

e) At Alfies we would have seating for everybody and dinner also.

It's your club and your meetings - it's up to you to decide what we should do and we really need to start looking for another place now and not when they close the library down. If Alfies is not the place to go to have our meetings then we (all of us) should start looking around for somewhere else and bring up suggestions and discussions to get our group a meeting place that is agreeable to the majority of our members now so we are not scrambling at the last minute.

Well that's all I've got at this time, see you next month. Omar

STDIO

ATARI ST COMPUTER USERS GROUP

PRESIDENT	Dave Hanthorn	252-3009
VICE PRESIDENT	Vic Albino	788-2736
SECRETARY	Jim Yee	643-9697
TREASURER	Paul & Jolene Bolme	882-1536
EDITOR	Joel Check	881-9375
DISK LIBRARIAN	Mike Check	828-0258
PRINT LIBRARIAN	Laurie Miller	
PROGRAM CHAIRMAN	Roger Bedell	
BBS SYSOP	Mike Check	828-0258

Meets: 1st and 3rd Mondays of the month at 7:00 PM at Data 10, 10525 Willows Rd., Redmond, WA.
BBS: STDIO, (206) 822-4085, 300/1200 baud.
Mail: STDIO, 8431 S.E. 39th, Mercer Island, WA 98040.
Dues: \$15 per year.

Club News

JULY 20th STUDIO MEETING NOTES

By Jim Yee

Business: New Officers introduced: Vic Albino - Vice President. Laurie Miller - Print Librarian (items can be checked out from meeting to meeting). Roger Bedell - new Program Chairman replacing Bruce Noonan who resigned.

Mike Check, the STUDIO Disk Librarian, reported that the STUDIO PD disks can be purchased at Xanth Corp. in Bellevue.

Q&A: Math chip support? Rumors that Michtron is coming out with a 68081 upgrade.

Does the COMPUTE! Magazine order line really only exist as a recording?

The translator to read Mac disks are supposedly available for owners of the MAGIC SACs. That makes the Macintosh emulator almost fully compatible.

Rumors Deals and Etc.: September and October should be the big software blitz.

Wall Street Article about the purchase of Federated Electronics by Atari Corp. Is Atari interested in other lines than computers? Well, Federated is more of a general consumer electronics firm. More concentrated High-Fi and home electronics than computers. National Semiconductor purchased the Fairchild chip manufacturing company, this was a firm that Atari was also interested in purchasing.

CD ROM drives are coming down in prices, as low as \$595 for the IBM PC's perhaps shortly they will drop in price to the target range that Atari has in mind for Atari's CD player.

Demo Section: Kevin Wolfe's, 'A Professional Musician's Demo of the Midi' - Midisoft Studio is the producer. Midisoft is a local firm based in Bellevue.

The MEGA ST - a hands on look at the real MEGA provided by XANTH Corp. in Bellevue.

Some new animations were shown; 'Rob says', the Xanth STation (a cyberscape animation) and Monarch demo.

* Newsletter submissions can be uploaded to our BBS, *
* brought to meetings, or via any acceptable method. *

T.R.A.C.E.

THE RICHMOND ATARI COMPUTER ENTHUSIASTS

PRESIDENT
SECRETARY
TREASURER
BBS SYSOP

Terry Schreiber (604) 272-5789
John Goolevitch
Chris Boenigk
Terry Schreiber (604) 272-5789

Meets: 2nd Tuesday and the 4th Sunday of the month at 7:30 PM at the RCA Forum, Sea Island, Richmond, B.C.

Mail: P.O. Box 1192, Postal Station A, Delta B.C. V4M3T3; or from the U.S. use: P.O. Box 2037, Point Roberts, WA 98281.

BBS: T.R.A.C.E. BBS, (604) 272-5888, 24hr., 1200 and 2400 baud. ST based w/20 MEG HD running Michtron BBS software. 9600 baud coming soon!



CLASSIFIED ADS

For The Members
By The Members

FOR SALE: 8-Bit and ST hardware:

- Two complete direct connect 10 MEG hard disk sub-systems for the ST. Each includes: case, power supply, Haba interface board/controller, Tandon half height drive, disk software (for HD formatting, demo graphics programs), and manual. (NOTE: These can also be used on 8-Bit systems equipped with ICD's MIO Board.) Asking \$375 for each sub-system (add \$15 if shipping is desired).
- ICD P-R Connection 8-Bit interface - \$65.
- SmarTeam 1200 baud Hayes compatible modem (w/manual and phone cable) - \$85.

Please contact Skip Sharow at 697-2706 (Bremerton) after 4PM or leave message.

THE ATARI SX212 MODEM - A BEST BUY!

A Hot New Product Reviewed by Tom Neitzel, S*P*A*C*E

Atari's new 300/1200 baud modem first appeared in local computer stores early this past week (9/21/87). It is not unattractive; being brown-gray in color with 1 RS232 connector (DB25), 1 S10 connector, 1 phone jack, Hayes style indicator lights on the front panel, and a separate power supply (that will run your 2600 game machine if necessary). The unit is 5.5 X 9.5 X 1.5 inches and has a nice 'heft' to it (must be LOTS of good components in it!). A manual, Genie and Byte BIX flyers are included. The manual is geared toward the actual use of the internal Hayes command set. The manual says that it can be used on the S10 port of the 8-bit machines, but *no S10 cable is included nor are any other instructions*. Atari has initially released the modem *without any handler to allow 8-bit direct-connect S10 operation* (these users could only use it if they had an RS-232 interface of some type).

Cliff at *Computers+* called me as soon as he had the modem in stock and asked if I would like one to review and to see if I could get it running on the S10 port. Not shirking a challenge I had my hands on it the same day! I unpacked the SX212, plugged it into my interface, connected the phone, turned on the power, booted up a terminal program and promptly logged onto THE REEF BBS. No pain or problems - Incredible!! By the way, there are no DIP switches on the SX212 modem; it appears to configure itself to your terminal settings. I continued to use the modem for most of the week in this configuration; finding the SX212 to be a rock solid device!

I decided to try the S10 direct connection on Wednesday. I hooked it up and tried a couple of terminal programs with

the standard R: and T: handlers, in fact all of the handlers I had! Nothing worked! All my years in Data Processing, and hacking (in the original sense), have taught me not to 're-invent the wheel'. I always first make a diligent search of all my resources (CompuServe, Genie, local BBS, word of mouth) to see if someone has already done the job. I finally hit the answer Friday on CompuServe. Bob Woolley, a member of the San Leandro Computer Club in California, had posted a message that he was running HomeTerm on an SX212 directly connected through the S10 port using the *Rverter* handler.

Following Bob's lead, I grabbed a copy of the *Rverter* handler, cleverly renamed it AUTORUN.SYS, stuck it on a disk with AMODEM, booted and had the modem come to life!!! I have tested this handler over the past day and have found absolutely no problems. The full Hayes command set is supported. Autodialing in both Tone and Pulse modes works. Uploading and Downloading work just fine. I have logged onto THE REEF, the S*P*A*C*E BBS, MOT, Genie, and Compuserve without problem. The handler works with both DOS 2.0 and 2.5 with ramdisk. I have not tested other DOSs.

I think that Atari has come out with an absolutely smashing piece of hardware! It allows both ST and 8-bit owners to get 1200 baud Hayes compatibility for a total investment of \$99.95. Additionally, the modem will work with any other computer with a standard RS-232 port. No built in obsolescence! I am disappointed that Atari did not release the 8-bit S10 handler with the modem, but... *with the Rverter handler.... we have just solved that problem!*

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OCTOBER 1987

PUGET SOUND ATARI ACTIVITIES

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3 SPACE MAIN MEETING 6 PM AT GODFATHER'S FRED MEYER CTR ++ PIZZA FEED ++
4	5 STDIO MEETING 7 PM DATA 10, REDMOND	6	7	8	9 STAR- BASE MEETING, 6 PM MOUNTLAKE TERRACE LIBRARY	10 SPACE TACOMA MEETING, 10 AM SOUTH END NEIGHBORHOOD CENTER, TACOMA
11	12 BRACE MEETING 7 PM LAKE HILLS LIBRARY, BELLEVUE	13 TRACE MEETING 7:30 PM RCA FORUM SEA ISLAND RICHMOND, B.C.	14 KC-ACES MEETING, 7 PM CENT. KITSAP JRHI SPACE ST SIG MEETING 6 PM, BUTLER'S	15	16 PSAN NOVEMBER NEWSLETTER INPUT DEADLINE! HELP YOUR CLUB WRITE FOR PSAN!	17 R-ATARI MEETING 7 PM (6 PM SET-UP) AT THE HARBOR TOWER, OAK HARBOR
18	19 STDIO MEETING 7 PM DATA 10, REDMOND	20	21	22	23	24 S*P*A*C*E HARDWARE SIG 10 AM, SO. END CENTER, TACOMA ----- STARBASE "MOD" CLINIC, 12 NOON PRECISION ELECTR
25 TRACE MEETING 7:30 PM RCA FORUM SEA ISLAND RICHMOND, B.C.	26 BRACE MEETING 7 PM LAKE HILLS LIBRARY, BELLEVUE ++ AUCTION ++	27	28 SPACE ST SIG MEETING 6 PM BUTLER'S, FEDERAL WAY	29	30	31 HALLOWEEN! "TRICK OR 1"

USER GROUPS - ATARI "TREATS"!